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ABSTRACT

Drawing on research into the importance of early childhood education, this guide provides guidance to those responsible for planning and implementing programs for young children in New York State. The guide suggests that quality preschool programs can meet the expectations of the Regents as expressed in their 1992 Early Childhood Policy Statement and at the same time provide the experiences children need if they are to successfully meet state standards for fourth grade. Following an introductory section, the second section of the guide presents the "Essential Elements of a Quality Preschool Program," including facility, staff, group size, curriculum and instruction, assessment, and family involvement parameters. The third section, "Children As Learners," details characteristics of young learners and principles of child development. The fourth section, "The Learner-Centered Environment," addresses assessing a classroom environment, and enriching dramatic play. The fifth section, "Curriculum and Instruction," examines what research indicates as best language, literacy, social studies, math, and science awareness. This section includes sample learning experiences and considerations for planning. The sixth section, "Dimensions of Assessment," advises on keeping track of children's growth. The guide concludes with information on professional development, a bibliography, and a program-wide and preschool classroom equipment and materials checklist. (SD)

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PRESCHOOL PLANNING GUIDE

Building a Foundation for Development of Language and Literacy in the Early Years

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The University of the State of New York
The State Education Department
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1998

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CONTENTS

Acknowledgments iv

Foreword/Statement of Purpose v

Introduction 1

Essential Elements of a Quality Preschool Program 3

Children As Learners 5
- Characteristics of Young Learners 6
- Principles of Child Development 7
- Play is Active Learning 9
- What Young Learners Do—What Teachers of Young Learners Do 10

The Learner-Centered Environment 11
- Designing the Learner-Centered Environment 12
- Messages Children Receive from the Environment 18
- Assessing a Classroom Environment 20
- Enriching Dramatic Play to Support Language and Literacy 22

Curriculum and Instruction 24
- Best Practice: What Research Tells Us 25
- Language and Literacy 27
- Social Studies 29
- Mathematical Awareness 31
- Science 34
- Sample Learning Experiences 36
  - Eric Carle Author Study 38
  - Me Museum 40
  - Trip to the Bakery 42
  - KWL Chart on Water 44
- Instruction in Preschool Programs 46
- Routines and Transitions 49
- Considerations for Planning 51

Dimensions of Assessment 53
- Keeping Track of Children's Growth 55

Professional Development 57

Bibliography 61

Appendix 63

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FOREWORD/STATEMENT OF PURPOSE

Now, at the end of the twentieth century, there is a renewed interest in early childhood education. The United States Congress and New York State Legislature have determined that safe, nurturing programs for young children are an essential element of welfare reform. Concurrently, the impact of early experiences on a child's brain development and future ability to learn is being reexamined by both researchers and practitioners.

The purpose of this document is to provide guidance to those responsible for planning and implementing programs for young children including those funded under the universal prekindergarten legislation of 1997. It suggests that quality preschool programs can meet the expectations of the Regents as expressed in their 1992 Early Childhood Policy Statement and at the same time provide the experiences children need if they are to successfully meet State standards in fourth grade.

The Regents policy on early childhood, defined as the prenatal period to age nine, reaffirms the belief that every child can learn and should have access to an environment which:

Provides for comprehensive, developmentally appropriate early childhood services and educational programs through a collaborative approach with other local, State, and federal agencies, and with children and their families;

Ensures an integrated and interdisciplinary approach to learning and the development of the whole child;

Addresses the need for health, nutrition, and parenting skills, and education with particular attention to the issue of teenage pregnancy;

Provides equity for all children and the opportunity to eliminate the effects of poverty, racism, and other conditions and forms of discrimination that place children at risk; and

Builds a foundation for lifelong learning and successful transitions from early childhood settings to the middle and high school levels of education, as well as to higher education, work, citizenship, and adulthood.

The *Preschool Planning Guide* reflects the commitment of the New York State Education Department to continue to work toward increasing the availability of quality preschool programs. It provides a framework for teachers and others who work with young children to create environments and develop curriculum, instruction, and assessment strategies that support children as learners. It is based on the recognition that teachers need many and varied opportunities to nurture and refine their craft in order to respond effectively to the diverse needs of the children with whom they will interact during their teaching careers.

INTRODUCTION

A series of events has increased awareness of the need for quality preschool programs in New York State, including:

Establishment of national education goals, the first of which speaks to the need for all children to come to school ready to learn;

Implementation of welfare reform that expands the availability of child care for working mothers;

Development of more rigorous learning standards for all students; and

Recommitment of the Legislature, the Board of Regents, and the New York State Education Department to ensure that all children learn to read by third grade.

The *Preschool Planning Guide* is designed to inform and support the work of teachers, administrators, and program developers who are responsible for assuring that children enter public and nonpublic kindergartens ready to learn. It outlines the characteristics and expectations of a quality preschool program and suggests that children's success in achieving the State's more rigorous learning standards begins at the preschool level.

The *Preschool Planning Guide* serves as a companion document to other curriculum and assessment materials developed by the Department including the *Early Elementary Resource Guide to Integrated Learning*, and the *Elementary Literacy Profile*, as well as the resource guides with core curriculum for the content areas. The Guide may be used for many purposes; it may serve as a hands-on resource for preschool teachers, as a self-assessment checklist for administrators, and as a planning tool for staff developers.

The Guide was created with the assistance of several preschool teachers, administrators, early childhood teacher educators, members of professional associations, and New York State Education Department staff who share the following beliefs:

All preschool children can learn and need to enter kindergarten ready to ***continue to*** learn;

All learning is interrelated and young children need many opportunities to build a knowledge base and develop more precise language to communicate their understanding of what they know;

Language and literacy development at the preschool level builds the foundation for learning across the content areas;

The arrangement of the learning environment strongly influences what is learned and how it is learned; and

Teaching is enhanced when time is allocated for planning, collaboration, and reflection among peers and others interested in the teaching and learning process.

This Guide has been organized to help the reader think through the stages of conceptualizing, planning, implementing, and evaluating a quality preschool program. A description of each section of the Guide follows:

***E**ssential Elements of a Quality Preschool Program* outlines critical components of effective programs.

***C**hildren As Learners* provides an overview of children as learners and outlines strategies teachers may use to plan and respond to children on the basis of their knowledge of how young children develop and learn.

***T**he Learner-Centered Environment* describes classroom and outdoor spaces that are cognitively, physically, socially, and emotionally supportive of young children.

***C**urriculum and Instruction* emphasizes the role of language and literacy development across content areas and provides sample learning experiences.

***D**imensions of Assessment* provides guidelines for appropriate assessment of young children and describes how student work samples and teacher observations may be used to keep track of children's growth and learning.

***P**rofessional Development* suggests ways to provide ongoing opportunities for teachers to extend their knowledge, reflect on their work, and fine-tune their practice.

***B**ibliography* includes resources, arranged according to sections in the Guide, that provide more indepth information concerning topics included in this document.

This document contains information, ideas, and strategies that may be useful to both new and experienced teachers, as well as policy makers and others with a vested interest in developing quality programs for young children. Teachers may use it creatively as a guide to establishing a climate that supports the development of language and literacy and builds a foundation for achievement of the New York State learning standards.

ESSENTIAL ELEMENTS OF A QUALITY PRESCHOOL PROGRAM

Attending a preschool program that meets certain standards of quality can have a positive impact on a child's future as a learner. Standards of quality emanate from beliefs about the nature of the young child as a growing, developing person and as a learner (see **Children As Learners**), and knowledge of how young children learn in group settings. The goals and expectations for children who participate in standards-based, quality programs are derived from these shared beliefs. Successful programs are those that establish a process for ongoing program evaluation and self-study to document movement toward achievement of the goals and objectives of the program.

Programs for preschool children provide a foundation for achievement of the New York State learning standards when they meet recognized program standards. Specific standards of quality are articulated by a program's funding source, accreditation requirements, or regulations, including those governing programs for children who have handicapping conditions or who speak a language other than English. Programs for young children need to incorporate the following universally recognized standards in their design:

Facilities

Indoor and outdoor spaces protect the safety, health, and well-being of children and adults. Classroom and outdoor spaces allow appropriate organization, movement, and interaction among the children and the adults. Bathrooms, with child-sized utilities, are available in or adjacent to the classroom to accommodate toileting, handwashing, and toothbrushing. A sink is available in each classroom to support children's frequent need to use water, for example, after using materials such as paint, paste, glue, play dough, etc. Classrooms and playgrounds are carefully planned in response to who children are and how they learn. The equipment and materials that support learning are easily adapted to the diverse interests, needs, and abilities of the children. Children and adults with special needs have easy access to the indoor and outdoor spaces and the materials they provide.

Staff

The critical relationship between the experience and training of staff and the quality of a program is well-documented. Preschool teachers, teacher assistants, and other staff have an in-depth knowledge of child development and how young children learn. They have access to ongoing opportunities to increase their understanding of children and the New York State learning standards and to improve practice. Teachers in public school programs are required to be certified; an early childhood annotation is recommended. In many areas of the State, proficiency in a language other than English is desirable. Teachers in other programs meet the qualifications of the licensing, regulating, and/or funding agency. Program administrators have administrative training as well as experience working with young children. Provisions are made for all staff to receive ongoing support and supervision through a dynamic process of professional development and performance evaluation.

Group Size

The ratio of children to adults may vary slightly depending upon the funding and/or regulatory source. All center-based programs require at least two adults for each group of children. Teachers are aware of the critical impact of group size, safety, and supervision on the daily schedule, arrangement of the learning environment, availability of materials and equipment, instructional strategies, and assessment techniques.

Curriculum and Instruction

Curriculum and instruction during the preschool years are informed by an understanding of general developmental patterns; knowledge of children's individual characteristics; awareness of the cultural, linguistic, and social contexts which shape the child's experience; learning standards which outline expectations for what children should know and be able to do; and the scope and sequence of each content area. Curriculum content may evolve from the learning standards, observations of children's interests, questions children ask, or shared experiences within the natural environment. Learning experiences for preschool children include a variety of concrete activities presented in meaningful contexts. These experiences are integrated across content and developmental areas and augmented with a variety of multicultural and nonsexist activities and materials that may be adapted to meet the special needs of individual children.

Assessment

Assessment occurs within the context of children's everyday experience as they interact with the people and materials in the learning environment. Beginning with the information and observations shared by family members as the child moves from home to the preschool, assessment continues as teachers and other classroom staff devise a plan for keeping track of children's progress. This includes ongoing communication with the family and other professionals who work with the child (see **Dimensions of Assessment**).

Family Involvement

Family members play a critical role in supporting the growth and development of their children. In early childhood programs families are viewed as partners in the planning, implementation, and evaluation of the program. Opportunities are available for parents and relatives to participate actively in the education of their children, in the decision making related to the program, and in other activities that address their role(s) as parent, worker, and citizen. Where space permits, an area may be designated for parent meetings, training sessions, and informal gatherings. Schools create environments conducive to active involvement of families by planning ways to establish rapport, by responding to opportunities to connect families with needed services, and by providing a variety of options for families to become partners with schools. All efforts are made to communicate with parents in their primary language.

CHILDREN AS LEARNERS

Development is a combination of maturation and learning. Substantial research and reflection on good practice suggests that development in young children:

- occurs simultaneously in all areas of the child's development—social, emotional, intellectual, and physical;
- is interdependent—each area of development affects the others;
- occurs in sequential stages;
- progresses from simple to complex;
- occurs at different rates for different children; and
- is critically impacted by a child's environment and experience.

It is crucial that teachers of preschool children understand these aspects of development and their implications for teaching and learning. Teachers need to know what to do and how and when to do it. It is equally important that they be able to articulate why they have made a particular decision or employed a specific strategy. The initial step in this process is for teachers to have firsthand knowledge of the normative and predictable aspects of child development as well as behavioral characteristics that are observable during the early years. This knowledge guides teachers as they undertake the second step in the process, to get to know each child as an individual through ongoing interaction and assessment techniques such as those described in **Dimensions of Assessment.**

The purpose of **Children As Learners** is to provide those who plan, implement, and administer programs for preschool children with information to help them understand the uniquenesses of young children. This section includes the characteristics of young learners, principles of child development, a description of play as active learning, and some typical behaviors of young learners and their teachers.

Characteristics of Young Learners

Researchers have identified specific characteristics, developed in the first three years of life, that serve as strong indicators of the ability to learn. The challenge for preschool teachers is to find the balance between supporting autonomy and encouraging initiative while at the same time providing a gentle introduction to the responsibilities and pleasures of being a member of a group.

The teacher must gather information about each child in the group. Home visits, conversations with families, information from other caregivers and providers of special services, and observation during the first weeks of school provide valuable knowledge of individual children. Teachers use this information to develop a balanced curriculum which builds upon children's understanding and provides opportunities for them to develop new concepts and skills.

Young children who are ready to respond to the challenges and experiences of learning when they arrive at a preschool program exhibit a variety of characteristics. Specifically, they may demonstrate:

Confidence → A sense of control and mastery of one's body and behavior, and a sense of self as a competent learner.

Curiosity → The sense that finding out about things is positive and leads to pleasure.

Intentionality → The wish and capacity to have an impact, and to act upon that wish with persistence. This characteristic is clearly related to a sense of competence, of being effective.

Self-control → The ability to modulate and control one's own actions in age-appropriate ways; a sense of inner control.

Relatedness → The ability to engage with others, based on the sense of being understood by and understanding others.

Capacity to Communicate → The wish and ability to exchange ideas, feelings, and concepts with others. This characteristic is related to a sense of trust in others and pleasure in engaging with others, including adults.

Cooperativeness → The ability to balance one's own needs with those of others in a group activity.

Adapted from: Head Start: The Emotional Foundations of School Readiness by Dr. Abbey Griffin

Principles of Child Development

In classrooms for young children knowledge of how children develop and learn is used to inform practice. Teachers' decisions about how best to support growth and learning during the early years are guided by principles of child development derived from the predictable sequence of human development. These principles reflect what is known about the strengths, interests, and linguistic and cultural backgrounds of young children. Included with each principle are specific strategies for providing meaningful learning experiences for young children.

Child Development Principles	Implications for Teaching
The physical, social, emotional, and cognitive domains of child development are interrelated. Development in one domain influences and is influenced by development in other domains.	Plan learning experiences which help students make connections across domains (i.e., language development has an impact on social interaction; physical ability affects cognitive development).
Development occurs in a relatively orderly sequence, with later abilities, skills, and knowledge building on those already acquired.	Organize the learning environment in accordance with knowledge of child development. Provide materials that children can use alone (puzzles, beads), alongside others (clay, paint at an easel) or as part of a group (dramatic play, puppets). Provide materials with varying degree of difficulty such as simple and complex puzzles, and manipulatives that are both easy and difficult to assemble.
There are variations in the sequence of development from child to child; individual children may develop more rapidly in one area than in another.	Individualize the curriculum to reflect the varied strengths, needs, interests, temperaments, and learning styles of each child. Allow children to work at their own pace and provide multiple points of entry into projects and activities.
Optimal periods exist for certain types of development and learning. The prime time for the acquisition of language and literacy development is during the early years.	Provide opportunities for children to talk with one another as they work at activities they have chosen, converse with adults individually, participate in small and large group conversations, listen to stories read aloud, and learn about the sounds of language as they sing songs or recite rhymes together.
Development proceeds in predictable directions toward greater complexity, organization, and internalization.	Plan activities that allow children to run, jump, hop, and skip prior to activities that require more coordination, such as walking on a balance beam or riding a two- or three-wheel bike. Classrooms should be equipped with materials at varying skill levels.

Child Development Principles	Implications for Teaching
Development and learning occur in and are influenced by multiple social and cultural contexts.	**I**nvite family members, including those whose native language is other than English, to participate in multicultural and cooperative learning activities such as preparing and cooking ethnic foods.
Children are active learners, drawing on direct physical and social experience as well as culturally transmitted knowledge to construct their own understanding of the world around them.	**P**lan curriculum which provides firsthand experiences and opportunities for social interaction, physical manipulation, observation, questioning, reflecting, and drawing conclusions.
Development and learning result from interaction of biological maturation and the environment, which includes both the physical and social worlds in which children live.	**S**tructure flexible learning experiences which respond to ongoing changes in the environment and children's growing ability to work cooperatively within the group.
Play is an important medium for children's social, emotional, and cognitive development, as well as a reflection of their development.	**P**rovide access to a variety of learning centers and projects to build a context for children to extend their learning, investigate the environment, and express their ideas.
Development advances when children have opportunities to practice newly acquired skills as well as when they experience a challenge just beyond the level of their present mastery.	**P**rovide the supportive environment children need to transfer existing knowledge (including the use of primary languages), practice new skills, and try out more complex experiences. Include a variety of books: wordless picture books, repetitive stories, and predictable texts.
Children demonstrate different modes of knowing and learning and different ways of representing what they know.	**I**dentify children's strengths, interests, and learning styles, and plan a variety of experiences to help them use their preferred modes of learning and represent what they know and are able to do as they paint, draw, build structures, engage in role play, or respond to music. Use a variety of media provided in the classroom or outdoor play area.
Children develop and learn best in the context of a community in which they are safe and valued, their physical needs are met, and they feel psychologically secure.	**E**stablish a community of learning and support within the classroom which accepts individual needs and respects the importance of building relationships.

Source: NAEYC/DAP in Early Childhood Programs

Play is Active Learning

Play is a critical part of the growth and development of young children. Children are learning when they explore, discover, investigate, role play, and use tools and materials in creative ways. Play is closely linked to cognitive, social, emotional, and physical development. It is the chief vehicle children use to express themselves verbally and nonverbally, to draw on past experience, and to use their perceptual-motor abilities. Young children's play may be characterized in many different ways. In the chart below, play is described from a social interaction point of view. This framework reflects young children's ability to engage in more than one kind of play activity as they move freely from one activity to the next. At any given time, a group of four-year-old children may be observed engaged in any of the behaviors described below. It is important to recognize that children in any group will be at various stages in play and social development. Some children will show characteristics of different stages, depending on the context of their play and their cultural background. A child may be observed with two or three peers, building an elaborate block apartment building and playing out the arrival of firefighters and the rescue of victims. The same child may later watch from the sidelines as others climb on the jungle gym on the playground. It is expected that children in a preschool will be encouraged to move toward more frequent engagement in cooperative or socio-dramatic play.

Stages of play are often described by observable behaviors such as those listed below:

Play behavior	*Description*
Onlooker behavior	Playing by watching or conversing with other children engaged in play activities.
Solitary independent play	Playing by oneself.
Parallel play	Playing, even in the middle of a group, while remaining engrossed in one's own activity. Children playing parallel to each other sometimes use each other's toys, but always maintain their independence.
Associative play	Sharing materials and talking to each other, but not coordinating play objectives or interests.
Cooperative play	Organizing themselves into roles with specific goals in mind (e.g., assigning the roles of doctor, nurse, and patient when playing hospital).

Adapted from: *Back-to-Basics: Play in Early Childhood* by Jill Englebright Fox Ph.D.

What Young Learners Do

Initiate activities that grow from personal interests and intentions;
Choose materials and decide how to use them;
Explore materials with all their senses;
Discover relationships through firsthand experience with objects and people;
Combine and transform materials;
Use age-appropriate tools and equipment;
Use their large muscles to develop balance and coordination;
Talk about their experiences with peers and adults;
Ask many, many questions;
Use their own words to describe what they are doing;
Draw on early experiences to make sense of new situations; and
Investigate and invent ways of using materials and tools.

What Teachers of Young Learners Do

Create and maintain a literacy-rich environment;
Provide space, time and support for children to use materials;
Seek out children's strengths, needs, interests, and intentions;
Listen for and encourage children's thinking;
Encourage children to do things for themselves;
Encourage children to express their feelings;
Redirect and extend children's learning;
Provide the positive reinforcement children need to develop confidence and competence;
Help children plan, carry out, and reflect on their learning experiences;
Model and reinforce appropriate social skills such as listening when others are speaking and respecting other's personal belongings; and
Encourage the development of the children's native language and culture; facilitates the transition to English.

Adapted from: High/Scope Curriculum

THE LEARNER-CENTERED ENVIRONMENT

The preschool classroom is a place where children are actively engaged in making meaning. The room itself and the spaces or learning centers in the room invite children to explore, converse, inquire, build, and create individually and as part of the classroom community. Teachers design the classroom so that it serves as an extension of their responsibility to shape and foster learning.

Even before they enter preschool, children have learned that different environments require different behaviors. A four-year-old knows that a ride in the car requires climbing into a car seat and buckling up. A visit to grandparents may mean acting differently from the way the child behaves at home. At home it may be all right to open the refrigerator and take a snack from a special shelf; at grandma's the child may need to ask permission before going to the kitchen. Preschool teachers build upon such prior learnings when they arrange their classrooms and equip learning centers. They design the environment so that the arrangement of centers in the room and the array of materials and supplies help children to understand the kinds of behaviors and interactions expected in each area. In setting up a classroom and provisioning the centers, teachers need to consider questions such as those listed below.

How do various centers invite or shape particular behaviors?

How does the environment convey the message that this classroom is a safe, child-friendly place?

What is the role of adults in clarifying expectations, providing new materials, extending opportunities for oral langauge, and supporting beginning reading and writing?

How might adults assess the extent to which the environment supports children's language and literacy learning, including the use of primary languages other than English and the transfer to English?

Designing the Learner-Centered Environment

The physical and emotional climate created within the classroom environment is an extension of the adult in conveying expectations and fostering learning. The environment is planned to be inviting and friendly to children; it may be changed in response to individual or group interests and needs. Adults in the classroom share responsibility for the initial design of the environment and the introduction of changes such as adding new materials or props or expanding or reducing the space for a center.

Part of the instructional task of the preschool teacher is that of manager and decision maker. Among the most important decisions the teaching team makes are those having to do with designing the environment. In the role of designer of the environment the teaching team:

Sends specific, concrete messages to children about what is expected and valued;

Influences learning by the inclusion of specific materials and equipment;

Supports and extends curriculum and instruction;

Builds a sense of community;

Creates an aesthetically pleasing climate; and

Attends to the health and safety of children in the group.

The environment can be designed to send specific, concrete messages about how materials are to be used, how children are expected to interact with one another, and what behaviors are valued. Messages are conveyed by:

Size and location: The classroom is accessible to children and family members. Classrooms for preschool children are usually on the first floor with easy access to an outdoor play area. Rooms are large enough to accommodate active learning and exploration.

Flexibility: Furniture in learning centers is chosen to provide flexibility so that the size of a center can be reduced or expanded, depending upon children's interests. Easy-to-clean tables can be washed after being used for an outside activity and readied for children to sit at during snack time. Furniture is easy to move. A carpeted area of the room often serves as a space for the large group meeting, or, at another time, a place to do puzzles or look at books.

Arrangement of learning centers: The learning centers are clearly defined. When arranging centers, adults consider the amount of space needed for each area, the relationship of one area to another, traffic patterns, and the visual boundaries that separate one center from another. The materials in each center are carefully organized and arranged so that they are accessible to children. Visual cues such as picture labels, clear plastic boxes for storage of puzzles and manipulatives, and shelves at children's height encourage them to put away materials for use the next day. Charts and pictures are displayed at the child's eye level so children can look at them and talk about them.

Adults responsible for designing environments express what is valued by making decisions to:

- Provide adequate space for active learning and minimize space required for tables and adult furniture.
- Mount children's work or reproductions of paintings and display them attractively.
- Collect children's work in a folder and share it with families during conference;
- Encourage children to care for their environment by locating centers for water or painting near a sink, by providing child-sized mops and brooms, and by placing waste receptacles in key areas of the room to encourage proper disposal of tissues or paper towels.
- Provide and read aloud beautifully illustrated books.
- Include opportunities for listening to all kinds of music as well as singing and moving to music.
- Avoid interrupting a child who is involved in a self-selected task.
- Provide opportunities for the children to share their observations with others during a small or large group time are guided by an adult who may serve as a scribe and write down what children say.

Adults influence learning by the way they furnish the classroom and by the materials with which the various centers are equipped. For example:

- Materials in each classroom area are presented in an organized, accessible, and inviting way. For example, a bookshelf that displays the covers of picture books invites children to make selections. Arranging unit blocks by shape and size so that the length of the blocks is visible helps children select the size of block needed for a building. Such an arrangement facilitates clean up as well.
- Materials are selected to provide varied opportunities for use. Several common manipulatives may be used for building. They may also be sorted by color, shape, size, or some other attribute.
- Centers include clusters of things that go together, and time is provided for children to talk about what the common element is and what else might be added. A display of soft and fuzzy objects might begin with finding a woolly caterpillar on the playground. Children might add a baby blanket, a stuffed toy, or a winter cap to the collection.
- Flowers, dried plants, seed pods, or other objects are available for children to arrange in a pleasing pattern or display.
- Materials are changed depending upon children's interests, the time of year, and ongoing themes or projects. For example, the October display of autumn leaves arranged by color or size and matched to cutouts of leaves from common trees is replaced by pictures and charts showing children's likenesses and similarities in food preferences, hair color, shoe size, or other attributes.
- Displays and materials are designed to invite children with varying interests and skills to participate. The water table is equipped with pint and quart measures and funnels as well as small, narrow-necked bottles which require precise, fine-motor control to be filled.

The adult designers of the environment support and extend curriculum and instruction in purposeful ways to aid use of language and move toward reading and writing when they:

- ▲ Incorporate opportunities to use books as sources of information in the various areas of the classroom. Books about buildings and machines may be displayed in the block area. Books about the care and feeding of gerbils are placed near the gerbil habitat. A guidebook about trees of the area is included near a tray of autumn leaves in the science area.
- ▲ Increase opportunities for children to write by including pencils and paper in several centers in the room. For example, in dramatic play there is paper for making grocery lists or taking messages. In the block area, paper and markers are available for making signs and tracing blocks.
- ▲ Use print and picture labels to visually organize the classroom. Common examples include labels on block shelves to show where various sizes and shapes are located, or pictures of various manipulatives attached to their containers, and replicas of highway or street signs to aid the flow of traffic in the playground area used for bike riding.
- ▲ Establish parent and child mail and message boxes in which notes for home, completed work, newsletters, or announcements can be placed.
- ▲ Provide notebooks that go back and forth from home to school for each child once a week to convey highlights of the child's experience. An alternative writing experience may be a notebook that accompanies a stuffed toy or live pet taken home for the weekend. Parents and children write to the class or share drawings that describe what happened during the visit.
- ▼ For other suggestions see **Enriching Dramatic Play to Support Language and Literacy.**

The adult designers of the learning environment help build a sense of community in the classroom when they:

- ▼ Assure that each child is greeted individually each day.
- ▼ Plan activities designed to help children learn one another's names.
- ▼ Create a space for each child such as a cubbie, locker, and/or message box clearly labeled with the child's name and photograph.
- ▼ Provide an area where children can place something they have constructed or painted to be shared at group time.
- ▼ Provide signs requesting that a project such as a block building be left standing until the next day.
- ▼ Take pictures of children as they are working.
- ▼ Provide adequate materials, such as clay or paper, so that all children have a chance to try new techniques as well as to practice already acquired skills.
- ▼ Provide adequate time for children to work in areas they select.
- ▼ Keep special projects available for several days so that children can practice new techniques such as folding or printing.
- ▼ Provide visual signs to suggest the number of children a learning center can accommodate (e.g., footprints around the water table, or tags to wear in the dramatic play area, or a specific number of chairs at a table).
- ▼ Develop a job chart and help children choose among jobs such as setting the table, feeding the pet, or watering the plants.

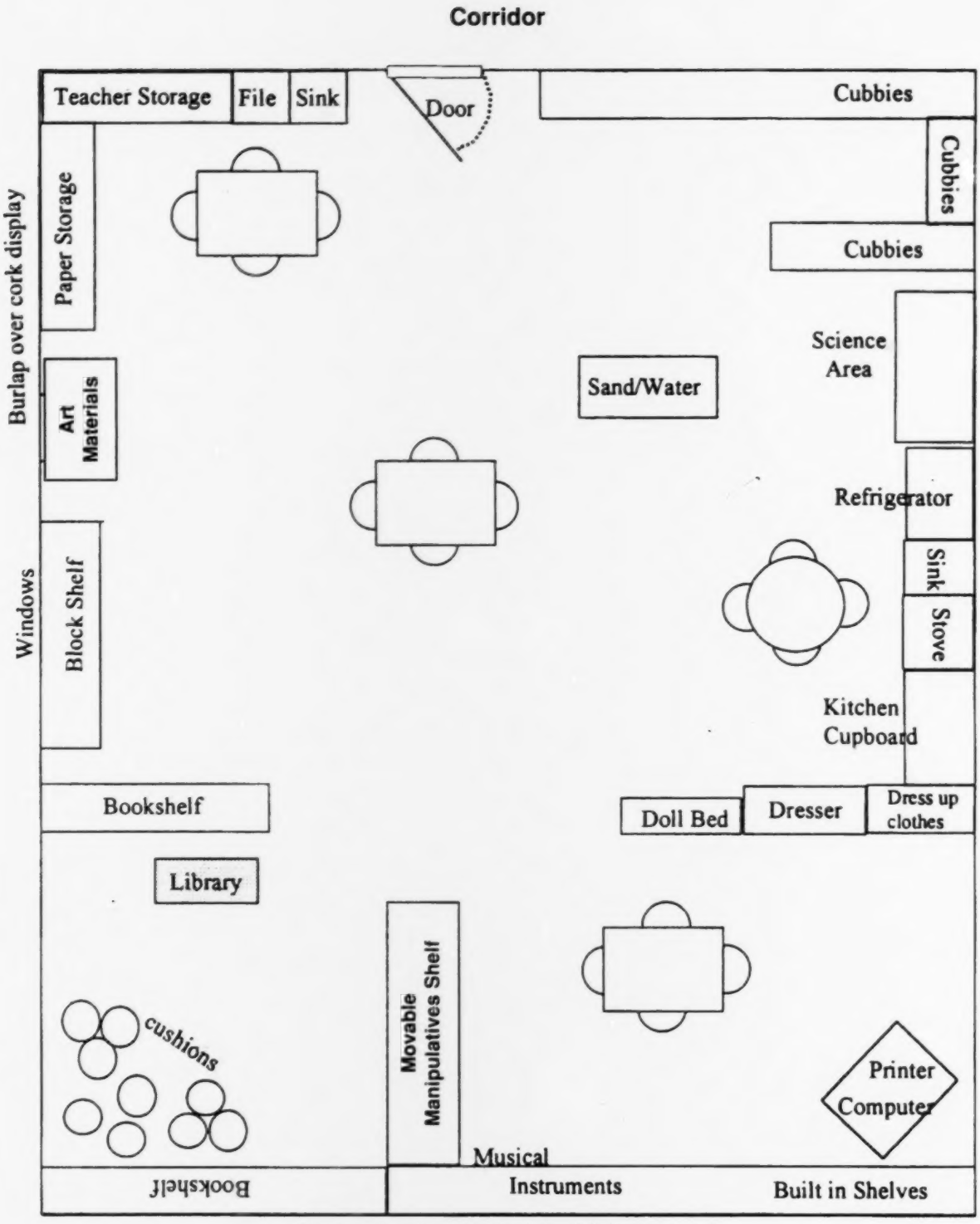
An aesthetically pleasing climate is established when the adult designers of the environment attend to:

- The amount of light in the room.
- The use of color and texture to balance the bright, hard surfaces of some of the classroom equipment. Examples include bright cushions in the library center; soft-bodied dolls and puppets, doll blankets, and a tablecloth in the dramatic play area; and placemats for meals and snack times.
- The need for ceremonies and celebrations including, but not limited to, birthdays and holidays. An example might be turning out the lights and playing special music occasionally, placing artificial candles on the tables at lunch time once a month, or setting up a special table where a volunteer or parent can have lunch with his or her child and a special friend.
- The need for natural materials to observe and explore including leaves, plants, rocks, shells, and flowers.
- The arrangement of materials for creative arts activities. For collage, a container with several separate compartments can be stocked with beads, feathers, bits of tissue paper, large sequins, plastic peanuts, etc., each in a separate compartment.
- The care with which children's work and photos of children are displayed.
- The provision of a small area for beautiful things which may include things children bring from home such as a piece of cloth or embroidery or a teacher display of a bouquet of flowers, paintings, photographs, or sculpture.

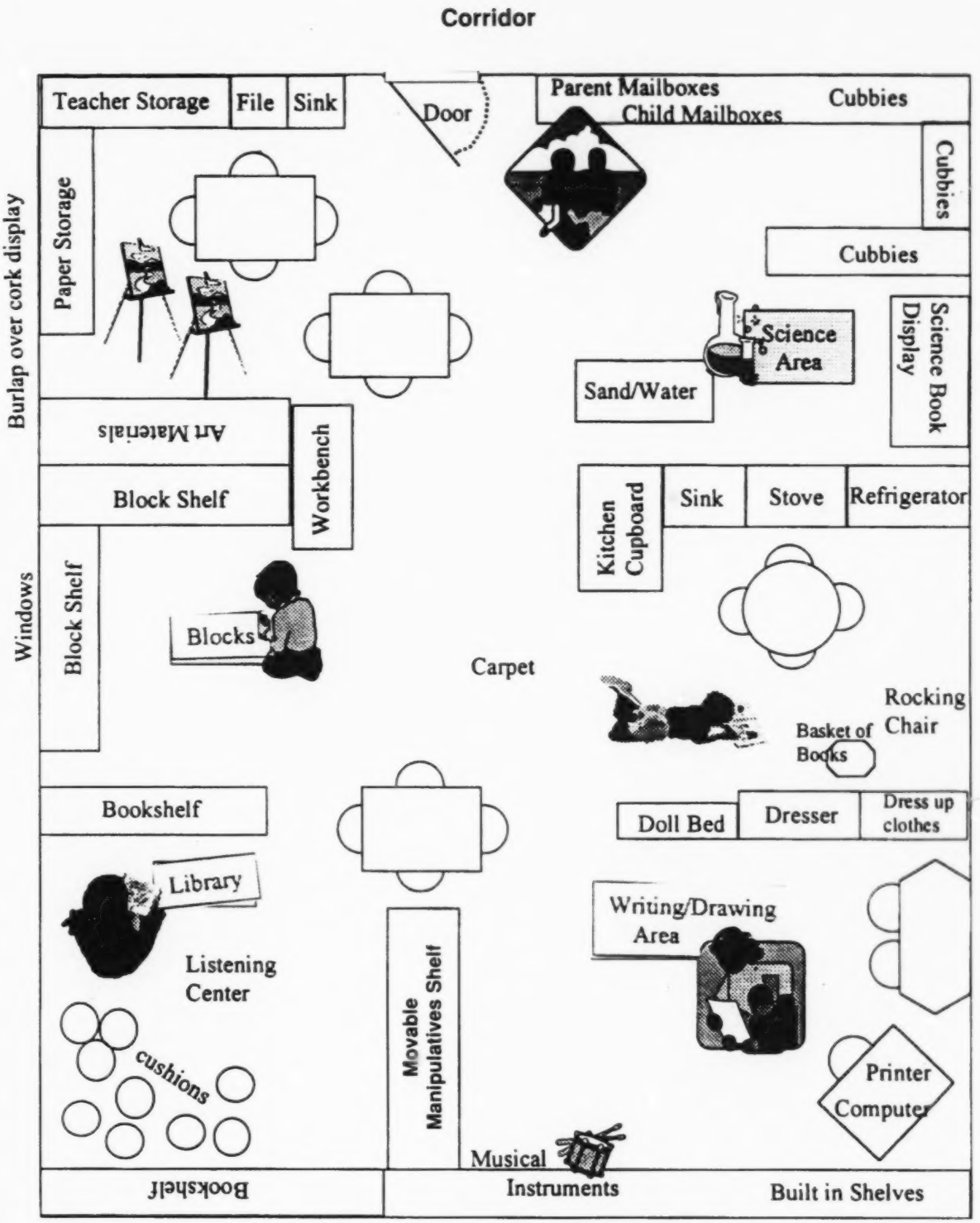
Finally, the adult designers of the environment are responsible for the health and safety of the children. In addition to assuring compliance with program standards and/or licensing requirements, teachers design the environment to:

- ❑ Maintain a safe flow of traffic in the classroom and on the playground to avoid accidents.
- ❑ Protect quiet work areas.
- ❑ Foster good hygiene by establishing routines and expectations for toileting, handwashing, toothbrushing, rest, and meals.
- ❑ Support children's involvement in self-care by placing products such as paper towels or tissues near a wastebasket, providing sponges or paper towels for cleaning up spills, and providing a child-sized broom and dust pan for cleaning up sand around the sand table.
- ❑ Assure that all materials, including cleaning materials, are nontoxic and safe.
- ❑ Design all areas of the classroom and playground so that children are always visible to adults.

The floor plans that appear on the next two pages represent classrooms designed before and after the teaching team had an opportunity to consider the various aspects of their role as designers of the learning environment. In the after design, the learning centers are more clearly defined. There is attention to the inclusion of spaces for parents and children to send and receive mail and environmental print to assist children with developing more precise language. Books and other materials that support the development of reading, writing, listening, and speaking are incorporated in several areas of the classroom. A workbench has been added and the block area has been enlarged to help children develop fine motor skills and strengthen the small muscles needed to draw and write.


Corridor
Teacher Storage
File
Sink
Door
Cubbies
Cubbies
Cubbies
Paper Storage
Burlap over cork display
Art Materials
Sand/Water
Science Area
Refrigerator
Sink
Stove
Kitchen Cupboard
Windows
Block Shelf
Bookshelf
Doll Bed
Dresser
Dress up clothes
Library
Movable Manipulatives Shelf
cushions
Printer
Computer
Musical Instruments
Bookshelf
Built in Shelves
Cork strips for displaying children's work

BEFORE



Cork strips for displaying children's work

AFTER

Messages Children Receive from the Environment

Positive Messages	How the Environment Conveys These Messages
This is a safe and comfortable place.	• Room dividers and shelves are at children's eye level. • There are properly sized tables and chairs, rugs, and comfortable furnishings for relaxing. • There is space to move around; indoor and outdoor traffic ways are clear. • There is a safe place for each child's personal belongings. • Children can see the teacher at all times, and the teacher can see the children. • The classroom furniture and outdoor equipment are solid, clean, and well-maintained. The room has a clean, neat appearance.
I belong here and I am valued.	• Pictures and materials in the room reflect the children's families, languages, cultures, and communities and are at children's eye/hand level. • The environment has been adapted for children with disabilities. • There are display areas reserved for children's work. • Children can find their names and their work posted in several places in the classroom.
I can make friends and share.	• Areas of the room are set up for small groups of children to work together. • There is a rug in a meeting area large enough to accommodate the whole class. • Materials are grouped for shared use (e.g., baskets of pencils, markers, and crayons for writing) and there are sufficient quantities. • There are mailboxes or a message board where children can leave messages for each other and the teacher. • Outdoor equipment which encourages children to play cooperatively is available.
I know what I'm expected to do.	• Everything is neat and labeled so children can find things easily. • Materials are within reach. • There is a chart listing job responsibilities for the upkeep of the room. • The weekly and daily schedules are posted at children's eye level. • Child-sized brooms, dustpans, and sponges facilitate cleanup. • Space is arranged to communicate how children should use materials and interact with their peers.
I can do interesting work here.	• The room and materials are organized in attractive, inviting ways. • There are sufficient quantities of books, objects, games, and collections for children to explore and investigate—enough to go around, but not so much that it is over-stimulating. • There are writing tools, blocks, art, and construction materials to encourage children to build, draw, write, and paint about what they are learning. • There are math and science tools, nonstandard and standard measuring devices, and magnifying lenses for investigations. • The materials and displays change on a regular basis.

Positive Messages	How the Environment Conveys These Messages
I can find what I need and put things back where they belong.	• Materials are logically organized and labeled. • Games with small pieces and manipulatives are in labeled (word and picture/symbol) containers. • Shelves are labeled to show where materials belong. • Waste containers are close to a sink.
I can make choices.	• Materials are placed on shelves where children can reach them. • There is access to all learning centers on a daily basis. • A large block of time is available each day to use materials in the learning centers and to work on projects. • There is a choice board; times are provided for children to choose their own activities, tasks, or jobs. • The outdoor play area is designed to provide additional choices and complement what happens in the classroom.
I am challenged to try new things.	• Opportunities are available to interact with different individuals or groups of children and adults in the learning environment. • Opportunities are provided to learn different ways to use familiar equipment and materials. • Books and pictures introduce new and unfamiliar people, places, and events.

Adapted from: *Constructing Curriculum in the Primary Grades* (Dodge, Jablon, Bickart)

Assessing a Classroom Environment

Checklists for assessing the classroom environment are available in a variety of publications (see **Bibliography**) and from the Internet. Other resources provide extensive lists to guide those responsible for arranging and equipping a classroom (see **Appendix**). A checklist may be useful to assess the extent to which the classroom environment contributes to overall program goals. Those who plan full-day programs, for example, might need to take a close look at what occurs during routines such as meals and rest.

The questions below are intended to guide teachers, administrators, and program planners as they develop strategies to assess classroom environments.

Organization

- Are clearly defined areas available for some combination of: creative art, writing/drawing, computer, language and literacy, music, blocks, manipulatives/math, dramatic play, science discovery, sand/water, large muscle, and woodworking?
- Does the arrangement of centers and materials suggest the behavior expected of the children?
- Is each center large enough to encourage cooperation among children?
- Does each child have a clearly labeled place to keep his or her personal belongings?
- Are there clearly labeled places to store children's completed work and work in progress?
- Are learning centers rich with print (e.g., menus, recipes, wall charts, and posters)?
- Is there a comfortable library center?
- Are book covers visible?
- Is there a space where an adult can work with a small group of children?
- Is there space to display individual children's work?
- Are books displayed in several learning centers?
- Are adult spaces, such as a cabinet or file cabinet, clearly defined?
- Is there a cozy getaway space where a child can work alone?
- Are chairs and tables the appropriate height for children?
- Is there a carpeted area where children can sit on the floor to read, use manipulatives, or participate in meetings?
- Are shelves, containers, and boxes containing materials clearly labeled with pictures, symbols, and/or print?
- Are blocks stored so that the length of each block is visible?
- Are symbols and pictures used to organize the placement of materials in the dramatic play area?

Overall Climate

- Is the atmosphere free from pressure?
- Do adults respond to children in positive and supportive ways?
- Do adults respond to one another courteously and respectfully?
- Do children interact and converse with other children and adults?
- Do adults listen to children attentively and encourage children to listen to others?
- Are parents invited and welcomed to participate when visiting the classroom?
- Does the classroom appear to be neat and orderly?
- Are floors, walls, and furniture clean?
- Has attention been given to providing varied textures, colors, and surfaces throughout the room? Examples may include cushions in the library center, carefully mounted reproductions of paintings displayed at children's eye level in the dramatic play area, or brightly colored placemats to identify each child's place at meals.

Awareness of Print

- Is print visible on charts and bulletin boards around the room?
- Are children's names printed on their cubbies, placemats, paintings and other items?
- Do children write their own names, or letters from their names, on their paintings, and drawings?
- Is clear, easy-to-read print displayed at children's eye level?
- Does the displayed print represent words familiar to children from daily contact in the environment including words related to special experiences and words from languages other than English?
- Have adults provided carefully printed cards bearing children's names and other carefully printed words for children to copy or "read?"
- Are mailboxes available for each child/family to encourage the sharing of messages between home and school?
- Is a newsletter describing children's activities sent home regularly?
- Are notices conveyed to families in languages they understand?
- Is print incorporated in each area of the classroom?

Materials

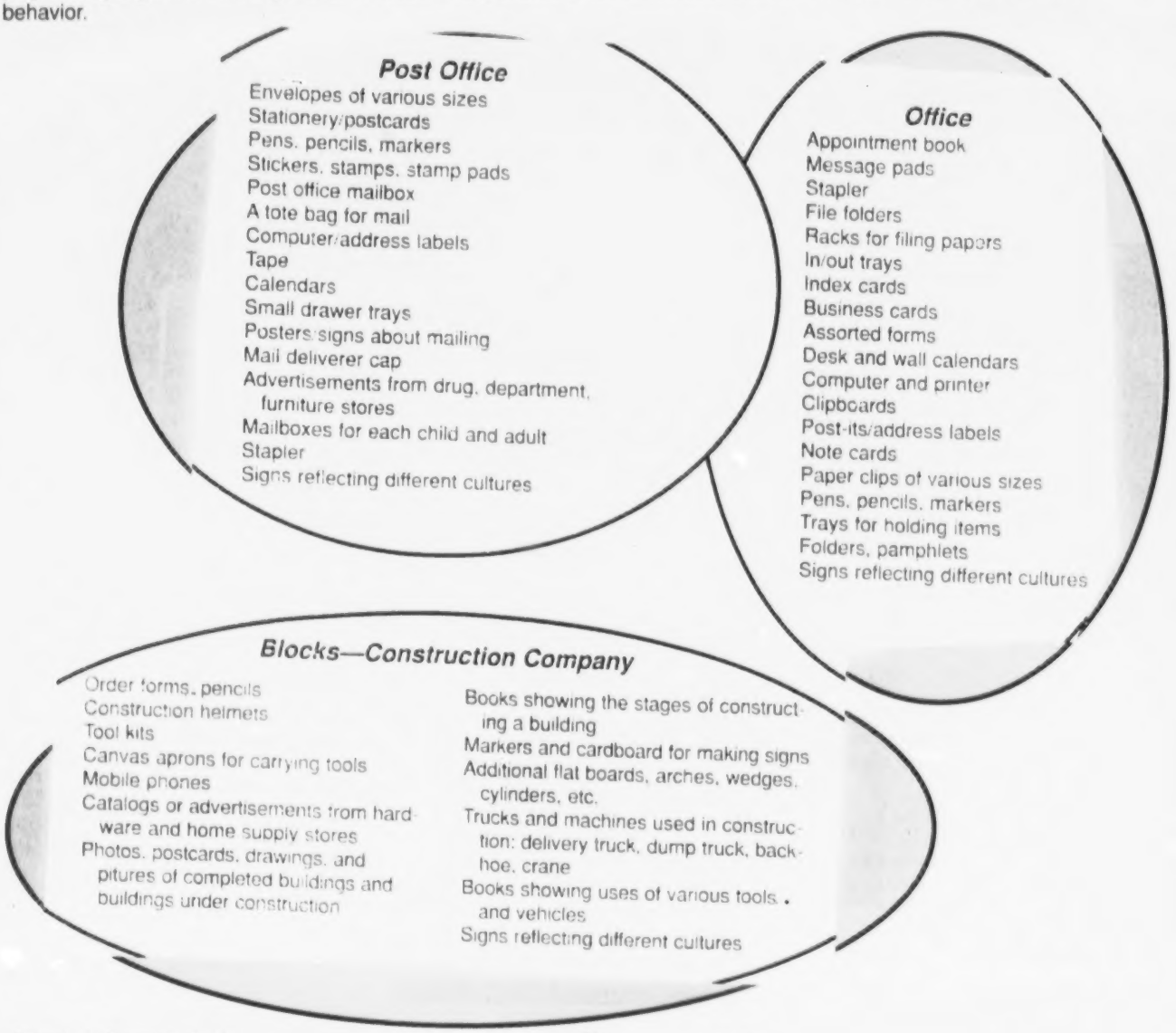
- Are materials easily accessible to and usable by children?
- Are sufficient quantities of materials available in each center?
- Are easels placed side by side to encourage interactive painting and writing?
- Are pocket charts or other methods displayed to detail activities such as daily or weekly jobs or choice of learning center?
- Are books changed frequently depending on children's interests and classroom themes?
- Do books include a mixture of fiction, nonfiction, and poetry; wordless books and those with varying amounts of print; and books in the native languages spoken by children and their families?
- Does the library center include books made by children?
- Does the listening center contain earphones, tapes, and accompanying print books for children to use independently?
- Are tapes in languages other than English included?
- Is the meeting area equipped with an easel or chart stand so the teacher can capture children's words, display the words of a favorite song, or review a recipe with a small or large group?
- Is the writing center equipped with pencils, markers, crayons, and paper of many sizes, shapes, and colors?
- Is the computer equipped with interactive software to encourage children to draw, follow directions, and use books available on CD-ROM?
- Is a printer available for children to use?

Enriching Dramatic Play to Support Language and Literacy

Dramatic play is an everyday occurrence in the preschool classroom as children pretend to cook the dinner, feed the baby, go shopping, or move to a new home. In addition to conversation, a few carefully selected props can suggest to children ways to play out adult uses of reading and writing in their daily lives. A notepad and pencil near the telephone, a basket of books and magazines near a child-sized chair, or supermarket fliers and coupons are a few ways to extend language play to include taking a message, reading a bedtime story to a doll, or making a grocery list.

As the year progresses, home play can be extended as the area expands to include a supermarket, doctor's office or health clinic, office, barber shop, beauty parlor, bakery, pizza restaurant, or other locations familiar to children. Teachers may introduce materials to develop a theme, augment a field trip, or build on a child's interest or experience.

Many teachers collect objects associated with various kinds of community sites and store them until they are needed. Parents often are willing to help gather objects. Listed below are some ideas for props which may be added to the dramatic play or language arts learning centers to provide opportunities for conversation and encourage reading and writing behavior.



Pizza Restaurant

Cash register
Play money
Small-sized pizza boxes
Round pizza tin
Pizza cutter
Wooden paddle
Twelve-inch cardboard circle to serve as a pattern
Red, green, brown, and tan construction paper for making pizzas
Order pads, receipt book
Pencils, pens
Menus with 5-10 items and prices
Telephone
Soda cups
Blackboard and chalk for specials
Apron or shirt and cap
Red-and-white-checked tablecloth
Signs reflecting different cultures

Supermarket

Cash register with tape
Play money
Grocery advertisement fliers
Plastic food items or cutouts mounted on board and covered with clear contact paper
Empty containers—cereal boxes, egg cartons, milk containers, plastic juice bottles, etc.
Stick-on price tags
Plastic and paper bags
Child-sized shopping cart and basket
Signs collected from stores
Crayons and markers for making signs
Paper, scissors, and tape
Aprons, jackets

Library

Library book return cards
Stamps for marking books
A wide variety of children's books
Bookmarks
Pens, pencils, markers
Paper of assorted sizes
A sign-in/sign-out sheet
Stickers
ABC index cards
Telephone
Telephone books
Calendars of various types
Posters of children's books
File folders
Signs reflecting different cultures

Bookstore

Cash register
Stick-on price labels
Pens, pencils, and markers
Posters, book jackets from children's books
Shelf or table for arranging books for sale by author or by genre (stories, real things, poetry, music, etc.)
Order pad, receipt book
Computer keyboard
Tape recorder and books on tape
Earphones
Bags for purchases
Signs reflecting different cultures

CURRICULUM AND INSTRUCTION

Since the adoption of more rigorous learning standards, educators across New York State are challenged to identify curriculum and instruction strategies that will strengthen children's ability to achieve the standards. In a preschool program, these strategies are based on knowledge of how children develop and learn, as well as what they already know and what they need to know and be able to do. Planning acknowledges that learning is playful, interactive, interdisciplinary, and connected. It also recognizes and provides for a balance between individual and group needs, between active and quiet times, and between teacher-directed and child-selected activities. Teachers influence what children learn by preparing the learning environment and providing an array of materials and equipment students may use to explore, investigate, solve problems, and find answers to their questions.

The following section of the Guide focuses on language and literacy as the foundation for curriculum and instruction in the preschool classroom. It does not provide a curriculum but rather a guide to planning and reflecting on learning experiences for preschool children. It presents core competencies for oral language, social development, mathematical awareness, and science, each of which includes an emphasis on language development. Sample learning experiences are provided for each content areas along with suggested techniques for planning, integrating, and reflecting on each theme or experience. Although this part of the document does not include a particular focus on the arts or physical education, preschool teachers are expected to provide opportunities for children to listen to music, sing, draw, paint, role play real and imaginary characters, and conduct indoor and/or outdoor gross motor experiences on a daily basis. A description of how the instruction or implementation of the content is connected to the different roles teachers play as they influence children's learning in deliberate ways is also included. This is followed by an overview of routines and transitions that provide both structure and flexibility within the learning environment and considerations for planning a day (or week) for a group of preschool children.

Best Practice: What Research Tells Us

Research that both informs and is informed by practice can have a powerful effect on teaching and learning. The following factors have been consistently identified in the professional literature as having a positive influence on development of language and literacy skills and as fostering achievement of the learning standards. Research also provides evidence of the need to ensure continuity of the following learning opportunities including the importance of building on the first language and literacy skills of children who are limited English proficient. As children progress from preschool through the primary grades, they need opportunities for:

Extensive reading

Extensive exposure to a variety of reading material both in and out of school results in substantial growth in the vocabulary, comprehension abilities, and information base of students.

Young children need access to a wealth of literature and many opportunities to hear language and listen to stories read aloud. Establishing a lending library and taking children and parents on a trip to the local library will increase the availability of books and other materials for children to use at home, including books that reflect the primary language of the home.

Interactive learning

As children interact with the people and materials in the classroom environment, they become immersed in thinking about, writing about, and talking about their learning experiences.

Preschool classrooms promote the development of competencies across content areas and developmental domains (social, emotional, intellectual, and cognitive). Learning experiences occur in carefully designed classroom areas where individuals or small groups are encouraged to work at their own pace. Classrooms also provide adequate time for the entire group to meet with adults to think and talk about their activities.

Extension of background knowledge

The more a reader knows about the topic of a text, the better the reader is able to construct meaning from text.

In preschool classrooms children have many opportunities to link experiences from home and neighborhood to new activities and new ways of describing what they think about and do. Trips around the building and neighborhood and to special places of interest (zoo, farm, bakery, market) extend experience and provide the language for talking about the experience and writing down thoughts.

Instruction in reading and writing strategies

Frequent exposure to experiences that demonstrate how print works when it is read aloud or written down contributes to improved reading comprehension and written composition.

Although it is not expected that preschool children will begin to read text or write, they are provided with many opportunities to hear text read aloud, to have individual words or letters emphasized orally, or to have attention called to the letter or sound as it is read. This includes reading in native languages other than English, when appropriate. Children observe adults writing, hear adults say letters or words as they are written, and have access to materials for drawing, painting, and writing letters, numbers, and words. The development of a sense of story is encouraged by daily reading and opportunities to talk about books as the reader asks, "What did you like about the book?" "What do you think will happen next?" or "What would happen if. . . ."

Integrated activities	Organizing instruction into integrated clusters of work that incorporate reading, writing, listening, and speaking activities promotes understanding of the connections among activities and ideas.	*Integrated, theme and/or project-based activities are the expectation in an early childhood classroom. Teachers use techniques such as placing books and other materials related to the theme in different areas of the room and selecting books and stories to share with the children. They also encourage children to talk and write about what they have learned or remembered, and help children make the connections that enable them to make sense of their experiences.*
Attention to skills	Young children need to be actively engaged in a mix of open-ended learning experiences and teacher-directed activities to acquire vocabulary and comprehension skills.	*For a four-year-old, the consolidation of language and communication skills is a major developmental task. In a preschool classroom, there are many opportunities for talk as children participate in teacher-led group activities and work with their peers at activities they have selected. This interaction helps children to build a vocabulary of precise language, practice the conventions of grammar and usage with greater consistency, and speak so that others can understand and respond. Adults model precise language use and provide the correct pronunciation or grammatical form (e.g., me gonna—I am going to). Adults also model writing by printing children's names on work, taking dictation, and developing large charts to describe the details of class experiences, including writing in children's native languages, when appropriate.*
Discussion and analysis	Instruction that emphasizes discussion and analysis rather than memory contributes most effectively to development of students' thinking abilities.	*Class schedules include daily meetings of all children in which individual contributions are encouraged. The adults move about the room while children work at various tasks. They meet with individual children and small groups to ask questions and make comments in ways that encourage children to respond. They may also remind children of expected behaviors and intervene in ways intended to help children find solutions to interpersonal problems.*
A range of literature	Listening and responding to a range of fiction and nonfiction literary works of high quality can help young children learn about the ideas and values of their own and other cultures as well as about the experiences of different groups.	*A wide variety of books are available in the preschool classroom and the school's library media center, including concept books and beautifully illustrated stories. Factual material, magazines, newspapers, books of photographs, books written in languages children hear and speak at home, books with illustrations that represent diverse people, and books that use language and illustration to extend the familiar are available to the children.*

Adapted from: *English Language Arts Resource Guide With Core Curriculum.*, New York State Education Department

Language and Literacy

The development of language and literacy begins at birth. Between the ages of three and five, language and literacy continue to emerge as children express their feelings, ask questions, share imaginative stories, and use other ways to communicate their understanding of the world. Young children use their previous experiences, including those developed in their native languages, to respond to spoken and written language in their environment. Although children between three and five increase their awareness of print and begin to associate print with meaning, oral language is their primary means of communication. Many of the interactive experiences in a preschool program support the development of listening and speaking concepts and skills. These activities may also be designed to foster the development of reading and writing. Teachers provide daily interactions with labels, signs, and other forms of print, read aloud to the children, and encourage their parents to do so as well. They also provide exposure to the sounds and names of the letters of the alphabet, and simple words. They ask predictive, "What if," and analytical questions before and after reading to children and record their responses. This helps to build children's vocabulary and comprehension. Phonemic awareness, the understanding that words are made up of a combination of sounds, is developing as children participate in a variety of songs, fingerplays, stories, and games that have rhyming words and alliteration. Children also develop greater awareness of the form and function of the alphabet through tracing shapes and copying or writing letters, names, and phrases. As children listen to patterned, predictable texts and have other meaningful experiences they can talk and write about on a daily basis, their language and literacy ability is enhanced.

For example, one preschool teacher takes attendance by having children sign in each day on a special piece of paper. Initial efforts are scribbles with an occasional letter. In this classroom children see their names in many places such as on their cubbies, on placemats at meals, and on cards in the writing center. They watch as adults write their names on paintings, drawings, and notes sent home. By midyear every child is forming at least the initial letter of his or her name; several are writing their entire first name. One child prints his first and last name and some children read each other's names.

One preschool teacher develops monthly posters of classroom life as an expression of the children's language and literacy development. The teacher and children decide what to include in the *Monthly Memory Poster*. Classroom experiences such as annotated photographs, samples of children's writings and drawings, favorite poems, songs, stories, autographs, and/or pictures of special guests may be included. The final product is put together in a Big Book format.

In the library/reading area of one preschool classroom, a variety of materials help familiarize children with the letters of the alphabet. There is a display of alphabet books, a poster of the children's names with the first letter highlighted, a magnetic board that children can use for matching and sorting letters, and the words of their favorite songs written on newsprint. Children are encouraged to make their own book using pictures, drawings, and the letters of their name.

The preschool years are the optimal time for experimenting with and consolidating knowledge about language. Young children listen and speak for all of the reasons detailed in the *Learning Standards for English Language Arts*: information and understanding; literary response and expression; critical analysis and evaluation; and social interaction. At the preschool level, much of the instruction is designed to help children develop competence in more than one area. For example, when teachers work with children to develop a chart of favorite foods, toys, or games, children are using language for information and understanding as well as for critical analysis and evaluation. When children begin to make generalizations about the work of an author or illustrator, such as Ezra Jack Keats, after they have heard several books read aloud, they are using language for literary response and expression as well as critical analysis and evaluation. Much of the preschool experience emphasizes language development as children participate in individual and group activities carefully designed to expand their ability to listen and to speak clearly and fluently, and to move them toward reading and writing. Listed below are some of the emerging competencies that children exhibit during the preschool years:

Information and Understanding

- use words to make connections between previous experiences and new experiences or ideas
- ask questions to obtain information
- recognize their own name in a variety of contexts such as language experience charts, cubbies, or paintings
- interpret the meaning of pictures, illustrations, simple charts, and webs by describing them aloud
- develop a more precise vocabulary (use words alone or in combination to describe experiences)
- recall a sequence of events from a personal experience or story
- make connections between oral language and print
- distinguish between print and pictures
- match, name, and identify letters of the alphabet
- make some letter-sound matches

Social Interaction

- listen and respond appropriately in conversations or group interactions
- articulate words with increasing accuracy, using conventions of speaking (such as plurals, verb forms, and pronouns)
- demonstrate that a response is expected when a question is asked

Critical Analysis and Evaluation

- use language to express relationships, make connections, and observe similarities and differences
- discriminate objects by sight, sound, touch, taste, and smell
- compare pictures, photographs, and models to real people, places, and things
- respond to "what might happen if" questions in situations including stories, interactions between peers, or when using materials

Literary Response and Expression

- predict what will happen next in a story
- dictate a sentence or story to accompany a drawing or to recall an experience
- retell or recite a familiar story, poem, song, or nursery rhyme after hearing it several times
- use drawings, paintings, scribbles, or letters to represent ideas and experiences that can be described to another person
- use puppets, toys, and other props to dramatize or retell stories, using the dialogue of different characters
- draw conclusions from a story or experience
- make associations with the new and unfamiliar from language acquired through direct experiences (e.g., child describes outdoor play activity as "a wild rumpus" after listening to *Where the Wild Things Are* by Maurice Sendak)

Social Studies

Social studies at the preschool level focuses on helping students develop an awareness of self as a growing individual. The children learn about similarities and differences among themselves, their peers, and members of their family and community. Children learn about their own needs, interests, and abilities. They have opportunities to interact with others, make choices, and express their feelings in socially acceptable ways. The variety of contexts that provide children with opportunities for socio-dramatic play also promote the advancement of social skills and dispositions.

As three-, four-, and five-year-olds move from being egocentric to being more social, they experience different stages of growth with evidence of specific abilities and characteristics during each stage. Four-year-olds may exhibit some typical behaviors of two- or three-year-olds in some areas or of five years olds in other areas. The role of the teacher is to foster positive communication and interaction as the students are actively engaged in a variety of learning experiences. Teachers should be aware that certain behaviors that are appropriate in one culture may not be acceptable, or desirable, in another. During the daily routine teachers may observe the development of social behaviors as children begin to:

- move from parallel and associative play to more give-and-take, cooperative play;
- understand the concept of taking turns and playing simple games in small groups;
- use developing oral language skills to negotiate interactions and establish personal relationships with peers during play (finding ways to connect block buildings or deciding which roles each child will assume in the dramatic play area);
- show pleasure in being with their peers by including them in their play, spontaneously offering things to others, complimenting others on new clothing, etc.;
- learn that their aggressive acts are not acceptable to others; children often try to justify them ("she hit me first");
- demonstrate increased understanding of self-regulation behaviors (such as using the bathroom, cleaning up without constant reminders, putting on proper clothing for outdoor play, etc.);
- show greater ability to control intense feelings like fear and anger; use words more often to express feelings; and
- respond quickly to the transitions and changes that occur throughout the daily routine.

These behaviors reflect the development of social skills and dispositions preschool children need to participate successfully in learning. In a preschool classroom, children are also expected to begin to develop the following social skills, which help to provide the foundation for lifelong learning:

- acknowledge greetings and farewells such as during arrival and dismissal times
- demonstrate polite behavior by saying "please," "thank you," "excuse me," and "you're welcome"
- use words to express feelings, needs, and choices
- demonstrate sensitivity to the needs, interests, and feelings of others
- recognize when it is appropriate to listen and when it is appropriate to speak
- participate in conversations about a story or personal experience
- listen and follow simple directions such as during group activities and excursions away from the classroom
- share likes, dislikes, and preferences
- make plans and decisions
- attend to a speaker in a one-on-one conversation or small group discussion
- use appropriate verbal and nonverbal language to respond to when, what, and how questions
- demonstrate appreciation of books and other materials by helping to keep them in good condition
- share experiences that are unique to their linguistic, cultural, or ethnic group
- demonstrate awareness of ways to keep self, others, and the classroom environment safe and healthy (refrain from pushing, use own toothbrush, return toys to proper storage area)
- demonstrate respect for others' belongings
- use self-help skills to take care of personal needs such as putting on boots, coat, hat, and mittens
- request assistance from classmates and adults as needed
- demonstrate respect for differences by interacting with peers and adults from diverse backgrounds and with different abilities.

Mathematical Awareness

Preschool children are exposed to numerous opportunities to learn math concepts every day. They begin to develop the concept of number as they interact with the objects and materials in their environment. They learn that objects may be manipulated, sorted, ordered, and quantified. They begin to understand that objects have similar and different characteristics; that each object is one part of a group of objects that are alike in some way; and that two sets of different objects may be matched one to one (e.g., balls and bats, straws and cartons of milk). Preschoolers make observations, learn about relationships, and begin to draw conclusions about number concepts as they have opportunities to engage in meaningful experiences involving skills that include collecting, counting, building, comparing, and classifying. As they proceed through the daily routine, children experience a variety of "math moments."

- How come my boots can't fit in my cubby?
- Teacher, Grace won't share the beads with me!
- Do we have enough cups for everyone?
- Teacher, Jamie said he's bigger than me!
- How many more carpet squares do we need?

When children enter a preschool program, they have had many math-related experiences. In order to build on this early exposure, teachers need to be aware of the following principles as they plan, teach, and assess mathematical concepts.

- Children play an important part in their own learning.
- Children learn math through firsthand, concrete experiences.
- Children learn math by manipulating objects and by acting on their environment both mentally and physically.
- Children learn math by interacting with other children and adults.
- Children learn best when new math experiences relate to what they already know.
- The teacher's role is to model language which expresses mathematical concepts. "You sorted the blocks by size." "You put the big blocks on the left and the little blocks on the right." "I see that you have more little blocks than big ones."
- Concepts in math should relate to concepts in other content areas, e.g., measuring ingredients for a recipe incorporates math, science, language, and social skills.
- Teachers discover how children learn math by observing what they do, listening to what they say, and studying representations of their work.

Adapted from: Math Moments, Scholastic (January 1997)

New York State mathematics, science, and technology learning standard #3 defines seven key ideas that describe what students should know and be able to do. Listed below under each key idea are some fundamental competencies preschool children are developing in the context of a rich environment that provides many opportunities to explore and investigate concrete materials. Open-ended materials such as unit blocks provide opportunities for children to develop several competencies simultaneously.

1. Math Reasoning

- sort and classify concrete objects such as buttons, blocks, and leaves
- recognize and identify likenesses and differences among people, places, and things
- group common objects, based on specific criteria, to make sets

2. Number and Numeration

- count a specific number of objects up to 10
- place objects in one-to-one correspondence (e.g., when setting a table)
- group objects by color, shape, or other characteristics
- use ordinal number names from *first* to *fifth*
- recognize numbers in the environment (on play money or in printed advertisements, house numbers, or signs on store fronts)
- separate a whole object into parts (e.g., an orange)
- recognize first, last, and middle (e.g., as children line up to role play a bus trip)
- use opposite concepts such as long and short, in and out, up and down, over and under, and top and bottom
- use concepts of quantity, such as more than and less than, when working at the sand table, preparing to serve snack items, or passing out crayons to classmates

3. Whole Numbers

- identify sets of objects
- recognize when a group of objects is increased or decreased by one
- put two sets of objects together to create a new set

4. Modeling/Representation

- match, name, and identify basic shapes including circles, squares, and triangles
- trace, copy, and/or draw basic shapes

- create pictures and designs, using cutout shapes, geoboards, tangrams, or other manipulatives
- use unit blocks or interlocking blocks to build structures and to represent the familiar world
- order sets of objects from smallest to largest and from largest to smallest
- recognize shapes of objects in the environment, such as windows, doors, tables, or area rugs
- recognize the essential characteristics of a shape when it is pictured or displayed in different positions
- represent data from the environment on a graph (favorite foods, number of boys and girls, types of animals)

5. Measurement

- use nonstandard tools, such as hands, feet, straws, string, popsicle sticks, tongue depressors, or blocks, to find the width, length, and height of objects
- explore the concept of capacity by using a variety of containers to compare materials (water or sand) and objects (beads)
- use terms, such as *longer, shorter; bigger, smaller; heavier, lighter;* and *more, less,* or *same* to make comparisons
- use a simple balance to find equivalencies

6. Estimation

- guess or predict the outcome of a specific task or activity (what will happen if?)
- connect possible outcome to an observation or past experience (dressing according to the weather)
- predict what should happen next in a sequence of familiar events (daily routine)
- use nonstandard tools to check predictions related to size, shape, capacity, quantity (use string to measure different-sized gourds)

7. Patterns

- use senses to recognize and identify patterns in the environment (indoor and outdoor)
- use a variety of materials to create, form, or extend a pattern (blocks, puzzles, beads, rocks, shells, etc.)
- follow directions to copy or repeat a pattern when stringing beads, making a clay snowman, or clapping to a rhythm
- compare the illustrations in picture books or magazines to find similarities or patterns
- duplicate or create sound patterns (music and movement activities).

Science

Preschool children learn about the natural world, including the physical properties of things around them, as they interact with objects, people, and other living things. Much of the content of science at the preschool level can be thought about in relation to Standard 1 and Standard 7 of the New York State standards for mathematics, science and technology. Standard 1 calls for scientific inquiry and the ability to pose questions, seek answers, and develop solutions. Standard 7 asks students to apply knowledge and thinking skills to real-life problems. Teachers at the preschool level plan opportunities to extend children's experience and provide children with precise language with which to describe their observations and understandings. Children whose early lives are rich in sensory experiences and accompanying verbal labels tend to have greater facility in building up the more complex labels and patterns required for thought and problem solving in later life.

Anyone who has worked with four-year-olds can attest to their continual questioning. They want to know why, how come, when, and where. Some of the ways adults respond to children's questions about the natural world and the relationships they observe include:

- Making available in the classroom a variety of natural materials (water, sand, dirt, and clay) and living things such as plants and classroom pets.

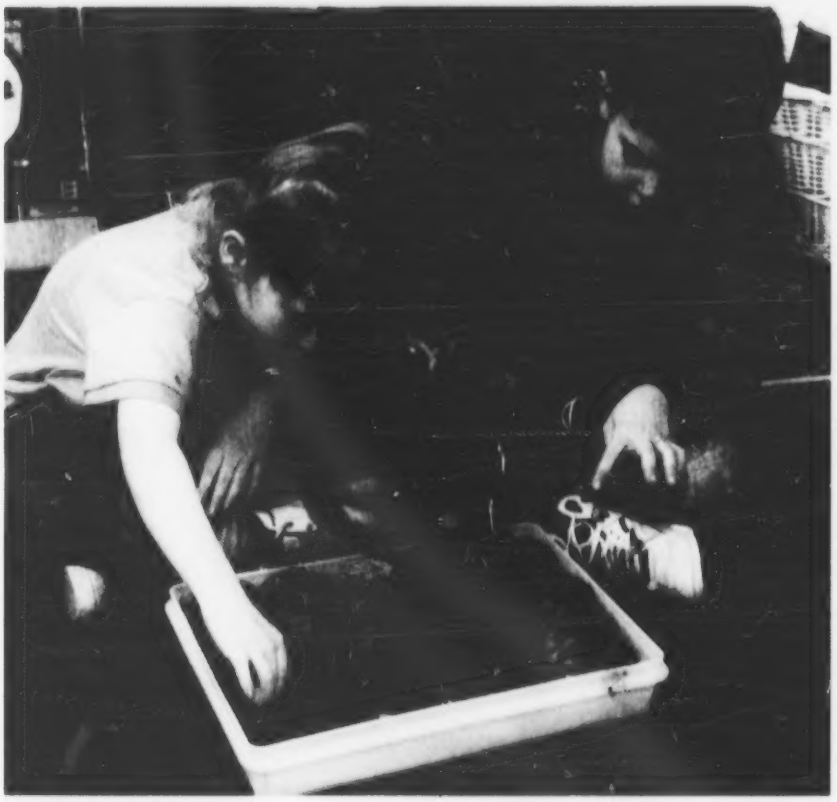
- Planning daily time on the playground and in walks on the school grounds and in the neighborhood, and encouraging children to notice phenomena, raise questions, and make comments about what they see.

- Providing organizers for children such as giving each child a piece of green, yellow, or brown yarn before a walk and having him or her match what is collected to the color; defining a space for observation, using a piece of yarn or string; or giving children a picture of a plant or animal track and asking them to find its match outside.

- Providing supports for looking (lenses, magnifiers) and collecting (jars, plastic bags).

- Selecting large themes, such as growth and change, which provide multiple entry points for individual children; providing activities which may be initiated in response to a child's interest or questions, the time of year, or their connection to another activity.

- Engaging children in activities which require them to:
  - Compare their weight and length at birth with their current weight and height.
  - Place a marker on a grid to form a two-color graph showing the comparison of heights.
  - Observe a classroom pet while dictating or drawing their observations.
  - Keep track of the amount of food a pet rabbit is given each day and check to see whether all, some, or very little has been eaten. After recording observations on a chart for several days, children will be able to suggest whether the same, more, or less food should be given each day.
  - Chart the growth of an amaryllis bulb; measure the height of the stem each day from the time the first green appears until the plant blooms.
  - Observe and describe with words or pictures three simple stages of a frog or butterfly from egg to adult.
  - Match photos or drawings from a book to changes in a tadpole or silkworm.
  - Identify what a pet needs to grow and remain healthy: food, water, and a human caregiver.
  - Identify what children need for good health: food, clothing, shelter, parents, or caregivers to provide nurturing.
  - Describe the similarities and differences in what humans, pets, and other living things need to support life.
  - Explore the relationship between active play, increased breathing, and heart rates.



Opportunities abound in the classroom community to apply to real-life situations what has been learned through observation, conversation, and carefully designed activities. Much of the work for the young child, for whom almost every experience is a new experience, will be in trying to find a way to integrate the new and unfamiliar into ways the child has already made sense of the world. Children delight in finding contrasts (hot/cold, day/night, wet/dry, rain/sun) or comparing one thing or person to another. ("You look like my nana. She wears glasses, too.") As they use the materials provided in the classroom, children explore physical properties such as: weight, color, texture, hardness, brightness, transparency, and reflectiveness. They also observe how these properties are affected as they maneuver their way about the classroom or steer a bike around the playground without hitting anyone. Children form and revise ideas about space and motion. Children also begin to build an understanding of time, long before they can read the numbers on a digital clock, as they experience the sequence of classroom routines, night and day, and the seasons. Such experiences contribute to a growing knowledge of recurrent events and predictability as well as an understanding of how long it takes something to happen. Children apply this knowledge to solving real-life problems, for example, when they:

- Describe the similarity between the way the class cares for a pet gerbil and the way families care for children by providing food, clothing, shelter, and love.
- Recognize that the source of clothing, food, and shelter is the natural world and that humans depend on one another and on the environment for the things they need.
- Use different muscles and ways of approaching a task when lifting light objects such as a carton of milk and heavier objects, such as a tray with full cartons of milk.
- Use paint in ways that keep colors clear and separate on the paper.
- Avoid riding into a wall or tree when on a tricycle.
- Predict what will happen when foods are exposed to heat or cold: for example, potatoes or carrots boiled in water get soft but an egg gets solid; biscuits are bigger and browner and have a different texture after baking.
- Observe and describe changes as drink mix is added to milk or water or as jello is mixed with water and chilled for several hours.
- Decide whether or not a jacket will be needed outside on the third of a string of warm April days.
- Predict the schedule of events between lunch and the end of the school day.

Sample Learning Experiences

Learning experiences at the preschool level provide opportunities for children to develop oral language, math awareness, social competencies, and science concepts that are the foundation for growth and learning at the primary level. Teachers may develop these experiences around a specific topic, theme, or question posed by one of the children. No matter what sparks the idea for a learning experience, teachers need to remember that concepts related to the learning experience may be integrated across content areas. For example, as children are learning to categorize objects according to shape, size, color, or texture, they are also learning words which describe each of the objects and categories, as well as how to work cooperatively with their peers to complete a task.

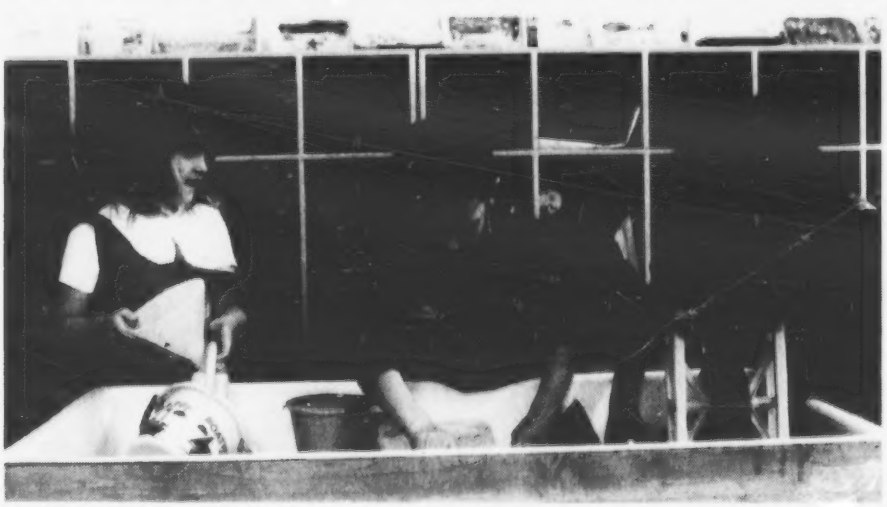
The planning webs and the KWL chart shown on the following pages are drawn from preschool classrooms. Each has a particular focus—oral language, math, social studies, science. Each illustrates how a topic or idea may be integrated into different classroom learning centers to provide multiple entry points for children. Such complex, integrated planning may be captured by a graphic organizer that depicts the interrelationships among learning centers and/or curriculum areas as opposed to a more linear approach to planning.

The **ERIC CARLE AUTHOR STUDY** is an example of a teacher-initiated theme. The web serves as a planning device for the teacher and teacher assistant as they brainstorm topics to be considered, books to be shared, and possible materials to include in learning centers. The web also suggests how a child's interest may be captured during a group conversation and then expanded, for example, as the child works on a drawing or shares a story of a caterpillar after observing caterpillars in the science area or outside.

The **ME MUSEUM** suggests a theme which may be implemented for several weeks during the school year. It includes opportunities for family involvement, provides time for each child to work individually with one of the adults in the classroom, and gives all children an opportunity to hear one another's names and recognize the similarities and differences between their own and others' families.

The **TRIP TO THE BAKERY** is an example of planning to extend an experience following a field trip. After the trip to the bakery, the teacher reflects on children's conversations and choice of activities. The web serves as a method of organizing ideas about how to further extend children's experiences, including an emphasis on language and literacy.

The **KWL CHART ON WATER** provides a different way to plan and implement learning. It begins with a discussion of what children already know about a specific topic. From there it requires children to think about what they might want to know about a topic. After engaging in a variety of planned learning experiences around the topic, the children have an opportunity to build on what they know and to share what they learned in the process.



ERIC CARLE AUTHOR STUDY

The author study provides a sample collaborative planning tool for adults who seek ways to develop curriculum around children's interests. One prekindergarten teacher provides the following background commentary for the implementation of this learning experience in her classroom.

The author study arose from our spring theme on butterflies. After discussing the stages of a butterfly, we read [one of Eric Carle's books] *The Very Hungry Caterpillar*. The children enjoyed the story so much that we decided to dramatize it for our parents during the Week of the Young Child. Each child chose a character and painted their own costume. This story was retold many times by every child in the class. The story became so meaningful for the class that we decided to read other stories by Eric Carle. We read three books: T*he Very Hungry Caterpillar. The Very Busy Spider*, and *The Grouchy Ladybug*. The children began to notice similarities among the books. The class dictated the following list of what we saw in Eric Carle's books:

Eric Carle likes to make suns with faces on them.

He likes animals and draws them.

He likes the color green because it's on every page.

He used snakes in *The Grouchy Ladybug, The Greedy Python*, and *The Foolish Tortoise*.

He uses the moon and the stars in his books.

His picture is in the back of the book.

He likes to paint in his books.

He likes to draw.

The praying mantis is in *The Grouchy Ladybug* and *The Very Quiet Cricket*.

The vocabulary the children have acquired is incredible. Words such as *chrysalis, foolish, greedy, lonely* and the names of the different types of bugs are used in their conversations. The children are now beginning to recognize Eric Carle's style and compare his style to other books to determine if it truly is an Eric Carle book.

What teachers do to foster language and literacy development:

Model reading behaviors.

Read and re-read books with predictable texts.

Talk about the letters, sounds, and words in each book.

Ask direct, open-ended questions about what was read.

Engage children in language games (Duck, Duck, Goose) and literacy-related actvities (making a recipe chart).

Provide tools to enable children to begin to draw and write.

Have children match or identify the author's name on other books he/she has written or illustrated.

Staff Planning for Eric Carle Author Study

(Documenting activities, necessary resources, and materials that must be collected and provided)

Technology/Computer

- Research insects, using picture dictionary software
- Draw imaginary insects, using drawing software

Language/Literacy

- Introduce Eric Carle books one at a time
- Provide other fiction and nonfiction books about insects
- Provide felt board pieces of foods eaten by the very hungry caterpillar
- Count foods, place in sequence, talk about what the caterpillar ate first, second, etc.

Science/Discovery

- Introduce monarch butterfly eggs or silkworm; place in terrarium
- Observe life stages of butterfly or moth
- Use flashlight to simulate firefly flashes
- Dig up space for butterfly garden with fourth-grade class
- Plan plants for butterfly garden in spring
- Observe insects in park/playground
- Collect insects to bring inside for two or three days before returning outdoors

ERIC CARLE AUTHOR STUDY

Group Language Activities

- Describe illustrations; begin to identify characteristics of style, such as themes or use of color
- Write a new story, using the Brown Bear word pattern on a language chart
- Talk about new words and what they mean (e.g., *greedy, lonely, grouchy*)
- Encourage questions, observations (e.g., I noticed . . ., I liked it when . . .)
- Talk about differences and similarities among insects (butterfly, firefly, ladybug)

Music

- Introduce songs and rhymes
  - Busy bumblebee
  - Ladybug, Ladybug
  - Eensey, Weensy Spider
- Play music and encourage movement of floating butterfly, darting firefly, crawling worm, slithery snake

Creative Arts

- Set up table with tissue and glue for tissue collage
- Introduce watercolor paints
- Continue to provide finger paint, tempera paint, markers, and newsprint
- Provide cardboard tubes, egg cartons, pipe cleaners, and other materials that will stimulate construction of insects (real or imaginary)

Dramatic Play

- Introduce new props
  - Flashlight
  - Antenna headband
  - Tie-on wings

Manipulative/Math

- Introduce "insect lotto game" matching question/response
- Graph favorite books, illustrations, pictures
- Introduce sequence cards of the stages of insect development

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ME MUSEUM

The social studies curriculum for preschoolers focuses on the children's immediate environment including self, home, and family. It reflects the philosophy that each child is a unique and special individual. Teachers plan many ways to help each child build a sense of self as part of the community of the classroom. They present questions to the children such as "What's special about me?" and plan shared experiences that help the children:

- **F**eel good about themselves;
- **G**et to know each other better;
- **R**ecognize likenesses and differences;
- **U**nderstand that every person has feelings and preferences; and
- **B**egin to expand their vocabulary.

The study of self culminates in a celebration called the "Me Museum," a display of several items of special significance to each child (infant shoes, favorite toys, photographs). A schedule is established so that each child can bring in items to display. Children describe the items to teachers and peers and share what makes them special. Teachers help by encouraging the inclusion of items that represent the child's culture. They also help organize the exhibit by labeling the items in the children's own words and displaying them according to criteria developed by the teacher or expressed by the child (old/new, personal belonging/something owned by a parent). Books, paper, drawing/writing utensils, and a variety of props are provided by the teacher to encourage children to role play aspects of their family life and use different media to represent their project, e.g., create a book cover, paint a self-portrait, make a poster of favorite foods, or tape record a story based on a personal experience.

Parents are invited to help children choose, describe, label, and present their treasures to their classmates and teachers. Teachers may also develop a language experience chart to reflect children's descriptions of their own and others' contributions to the Me Museum. Books that help children focus on relationships with family members include:

What Mary Jo Shared—J.M. Udry
You'll Soon Grow into It Titch—P. Hutchins
Carrot Seed—R. Krauss
All Kinds of Families—N. Simon
Family Pictures—C.L. Garza
Black Is Brown Is Tan—A. Adoff
Amazing Grace—M. Hoffman

What teachers do to foster language and literacy development:

Make labels for each item a child brings to share; include labels in the display.

Talk about the items and record responses on a language experience chart.

Meet with individuals or groups of children to record how they feel about each item they selected to share with the class.

Ask children to compare similar items (e.g., baby shoes, toys, etc.) and record their answers.

Read stories that depict how children express their feelings about people and events.

Allow individual children to choose a word and share what it makes them think about; record their responses and share them at group time.

Social Studies—Understanding of Individual Uniqueness

(The self and others)

Connections to Home and Family

- Calendar sent home in January. Families asked to choose a week between February and May for focus on their child.
- Families help children choose 5-10 objects to include in the classroom display (such as photos, baby clothes, favorite toy, favorite book)
- Family members visit during the child's week to share a story, food, article of clothing, or something special to their family/culture.
- Family members join child at a special table at mealtime.

Oral Language

- Children and teacher examine objects brought from home:
  - objects are labeled.
  - objects are arranged in a display.
  - child dictates a story about one or more of the objects.
  - teacher records child's words.
- Child and/or parent share special words from their home language
- Each child compiles "A Book About Me," containing a self-portrait; a drawing of his/her family; a list of favorite colors, foods, toys, etc.

Dramatic Play

- Baby-sized dolls and baby clothing and other props are provided so that children can pretend they are caring for a real baby.
- Clothing and household items representative of children's homes and cultures are available for role playing ideas about adults.

Me Museum

Art—Creative Expression

- Children and teacher arrange bulletin board or table display of things brought from home, e.g., baby bonnet, photos, favorite toy.
- Paint, markers, pencils, crayons, and paper are provided to encourage children to draw pictures of themselves and of others in their family.
- A display of photographs and children's self-portraits is arranged.

Group Language Activities

- Child of the Week describes one or more items brought from home to the group (e.g., "This is the hat I had on when my daddy and mommy brought me home from the hospital.").
- Teacher and child read the labels from the objects in the display and share.
- Children and teacher make charts showing commonalities, such as number of children in family, number of families with babies, number and type of pets, kinds of vehicles (car, truck, van).
- Find differences and similarities in their collections.
- Interview one another to find favorite foods, colors, and toys, and they chart results.
- Collect information about their current height and weight and compare it to their length and/or weight at birth.

Stories

- The Child of the Week selects a favorite story to be shared at group time.
- Parents are encouraged to send in a favorite book, which may be read to a child and a friend.
- Books about families and family relationships are selected for sharing with the group—*What Mary Jo Shared* (Udry), *The Keeping Quilt* (Polacco), *Amazing Grace* (Hoffman).
- Family members are invited to share songs, poems, or stories with the group.
- Each child contributes drawings or words to "A Book About Our Class."

TRIP TO THE BAKERY

The Trip to the Bakery learning experience provides a reflection on the kinds of activities children may engage in as a result of visiting a neighborhood bakery. The trip was planned as an extension of a classroom experience which included several cooking activities. Cooking provided children with an opportunity to read picture recipes during group time and follow the recipes with the assistance of an adult who worked with small groups to prepare oatmeal for breakfast, vegetable soup for lunch, or cookies for snack. The children were introduced to words such as *boil, stir, mix,* and *beat.* They used tools such as wooden spoons, vegetable peelers, whisks, and eggbeaters. They also counted out the number of cookies or muffins for children at each table. The dramatic play area was equipped with props (playdough, rolling pin, cookie cutters, muffin tin, plastic mixing bowls) to help children role play their experiences.

The Trip to the Bakery is an example of the reciprocity between language and experience. The focus of the teacher's planning is the use of math-related words for shapes, amounts, weights, and sequences. Language introduced during the trip is reinforced during the group meeting (a pound of sugar, a dozen donuts). The teacher's careful attention to equipping the classroom areas encourages children to use math words to describe their activities in the context of their play. Children's literature which complements this learning experience includes:

Bread, Bread, Bread—A. Morris
The Doorbell Rang—P. Hutchins
The Little Red Hen—P. Galdone
The Gingerbread Man—*P. Galdone*
If You Give a Mouse a Cookie—L.J. Numeroff

What teachers do to foster language and literacy development:

Record or graph on newsprint what children remember (saw, heard, touched, tasted, and smelled) about the trip and display it.

Ask children to match, name, or identify words they recognize from the newsprint.

Provide pictures and labels for different foods and encourage children to match them to real foods.

Assist children in making a cumulative recipe book.

Trace, label, and display the tools and equipment needed to prepare a recipe.

Plan games/activities that incorporate rhymes and other playful language about food.

Introduce initial letters and sounds of objects seen at the bakery; identify other words that begin with the same letter or sound.

Staff Reflection on Activities Related to Counting and Number

(Showing how a focus on one content area is integrated with other areas)

Manipulatives/Math

- Arrange pictures or replicas of baked goods into categories: cookies, cakes, pies, breads, rolls, and muffins.
- Count out two cookies for each child/adult for snack.
- Make chart showing favorites:
  - Types (cookies, cupcakes, muffins).
  - Flavors (chocolate, peanut butter, oatmeal).
- Sort pictures or replicas by shape, size, flavor, decoration.
- Arrange replicas by size, shape.
- Use play pennies to buy pretend cookies in the dramatic play area.
- Use cutters of different shapes (heart, circle, square, diamond) to create play dough cookies.
- Children and parents cut out grocery ads showing the price of a loaf of bread, a box of cookies, one muffin, etc.

Music

- Participate in counting and sequencing songs and finger plays.
- Imitate movements used in preparing a recipe (e.g., shake, stir, spread).

Group Activities

- Discuss which recipe the class will bake (cookies, muffins, bread).
- Interpret picture recipe chart.
- Predict what will happen as recipe ingredients are combined and baked.
- Name the ingredients needed to complete the recipe (flour, sugar, chocolate chips).
- Identify equipment needed to complete the recipe (e.g., bowl, spoon, sifter).
- Recall and list steps in making a recipe for play dough, cookies, etc.
- Taste the completed product.
- Make a class book containing photos and the children's words about the trip to the bakery and/or the baking project.

Dramatic Play*

- Use plastic money to buy and sell bakery items.
- Create play dough cookies, muffins, and birthday cakes to sell in the bakery.
- Match the number of cookies requested to the number of pennies paid by the buyer.

Language/Literacy

- Dictate or draw their own recipes.
- Cut out and identify bakery items from grocery ads.
- Contribute to group story about trip to the bakery or the steps in completing a recipe.
- Name ingredients and equipment used in the bakery.
- Arrange and label baked goods made of play dough or plastic replicas of familiar items.
- Read picture recipe chart and charts of songs and finger plays.
- Use flannel board cutouts to retell an experience.

Creative Arts

- Children and adults create props for bakery dramatic play—round paper hats, aprons, play dough baked goods,
- Use buttons, glitter, and beads to decorate play dough cookies and cakes to sell in the "bakery."

Science/Discovery

- Experiment with blending water with one other ingredient (flour, salt, sugar, oil) and record their observations or report them to the group.
- Compare the ingredients needed for different recipes noting same or different ingredients or amounts of flour, sugar, or liquid.
- Participate in measuring, pouring, mixing, and stirring to make cookies, muffins, or other products.
- Predict what the finished product will look or taste like.
- Taste finished products.

* Note: Props added to the dramatic play area during the bakery study include cash register, play money, paper, pictures, or plastic replicas of baked goods, trays for displaying items, small pans, pencils, chalk, order pads, bays for purchases, chalkboard to list specials, white apron, and cap.

KWL CHART ON WATER

There are a variety of graphic organizers available to children and teachers as they think about the natural and physical world. One effective strategy is a KWL chart, which begins with what is already **known**, then considers what the group **would like to know**, and after several days of exploration and observation, reflects on what has been **learned**. This strategy gives teachers an opportunity to build on what children already know. It also suggests that children can set the direction for learning with the questions they raise. Because it is a group process, the strategy models the kinds of thinking valued by scientists and researchers as they pose and refine their questions, determine how to find a solution, assemble materials, and share and check results. On the following page, a record of what a group of four-year-olds knows about the properties of water appears in the What We Know About Water column. Some of their questions are listed in the What We Would Like to Know column. Their responses are recorded by the teacher during a group meeting.

Once the questions were listed and talked about, the children, with some adult prompting, decided to focus on finding out how much water would be needed to fill the tub in the water table all the way to the top. In response to the teacher's query, "How could we find out?" more questions were listed. They included:

- How many pails would it take?
- How many big bottles (soda bottles)?
- How many little bottles (8-ounce baby bottles)?
- How do we check to make sure something is full?
- How can we clean up if we spill some water?
- How can we keep our clothes from getting wet?
- How long will it take my shirtsleeves to get dry?
- How deep is the water? Where does it come to on my arm? on the ruler?
- How can we empty the tub after we fill it?

In response to these questions, the teacher and teacher assistant made a list of materials needed. They decided to each work with a group of three or four children over the next several days, helping the children keep track of their results. The materials list included:

- Water table tub
- Clear 2-liter bottles
- Small 8- 10-ounce bottles
- Measuring cups—16-ounce, 8-ounce
- Clear plastic tubing
- Towels
- Large sponges, mop
- Large plastic sheet or drop cloth
- Newspaper
- Smocks.

After each team completed their investigation, the teacher met with them to record what they learned. Some of the books the teacher introduced to reinforce this activity were:

Splash!—A. Jonas
Water Dance—T. Locker
Froggy Learns to Swim—J. London
A Drop of Water—W. Wick
Hot Hippo—M. Hadithi, A. Kennaway
Waters—R. Broda, E.N. Chase

KWL CHART ON WATER

What Children Know	What Children Would Like to Know	What children learned
• You can drink it. • You can pour it. • You wash the dishes in it. • You wash clothes in it. • Take a bath. • Take a shower. • Go swimming. • Water gets cold. • It gets hot. • It makes ice. • It rains. • It squirts. • Snow turns into water. • My boat floats on the water. • When I drop soap in the bathtub, it splashes. • The soap goes down. • It sinks. • At the beach, the water is cold. • It makes waves. • You can see your feet in the lake. • You can see through a glass of water but not a glass of milk.	• How can we make ice? • How can we make bubbles? • What things will float? • What things will sink? • How much water does it take to fill the water tub all the way to the top?	• Ways of keeping track of the number of times each pail or bottle was filled; • A beginning understanding of the relationship between the size of the bucket or bottle and the number needed to fill the tub; and • The relationship between the size of the container and its weight when full. • Opposite concepts such as wet/dry; full/empty; big/little; and float/sink.

What teachers do to foster language and literacy development:

Record what is seen and heard as each team of children undertake to fill the tub in the water table.

Allow each team to share their experience; record key words.

Provide materials in the writing center and creative arts area to invite children to represent their experience with water through writing, drawing, painting, etc.

Talk about indoor and outdoor uses of water and record them on a simple graph.

Read books about water and identify words to post on cards in the Science/Discovery and Sand/Water areas.

Instruction in Preschool Programs

The *Preschool Planning Guide* suggests that the overall goal of instruction at the preschool level is to build a foundation for lifelong learning and achievement of the learning standards. The following questions are at the heart of how preschool teachers and program developers plan, prepare, and provide opportunities for children to reach their potential.

- What is the nature of instruction at the preschool level?
- What are some ways teachers influence what children learn?

Instruction includes the deliberate ways teachers influence what, where, when, how, and with whom children learn. Instruction is embedded in the many roles teachers play as they design learning environments, arrange materials in a variety of learning centers, and plan daily routines and transitions. This includes scheduling a balance of indoor and outdoor, active and quiet, individual and group, and child-initiated and adult-directed learning experiences, and implementing a comprehensive assessment plan to stay abreast of children's progress.

As MANAGERS *and* DECISION MAKERS, *teachers plan and orchestrate the availability of a variety of learning experiences for children. They include a rich array of materials and props in clearly defined learning centers to capture and sustain children's interest. They provide the blocks of time and flexibility in scheduling that children need to explore the learning environment and make choices among the wealth of materials and activities provided in the classroom and outside. They adjust the daily schedule to accommodate a specific theme or project and designate space to display collections or samples of children's work. Teachers are always alert to situations or occurrences that require them to make on-the-spot decisions in regard to redirecting behavior, responding to children's questions, and incorporating materials that challenge children's natural creativity.*

As OBSERVERS, *teachers are attuned to the flow of the classroom and the engagement of small and large groups, as well as individuals. The teacher focuses on behaviors that indicate how children are building on or extending knowledge of their world. The teacher captures these behaviors in a systematic way by recording anecdotal notes and collecting samples of children's work to review with the child, other adults who work with the child, and the child's family. Teachers also observe and record a variety of behaviors, such as:*

- what activities children select and how often;
- how children use materials;
- how children express what they understand; and
- who children interact with and how often.

The observations and work samples provide ongoing documentation of what children know and are able to do. This documentation informs curriculum development, instruction, and assessment, and helps teachers make decisions regarding how to continually adapt the learning environment to meet the diverse needs of the children.

As MODELS AND DEMONSTRATORS, *teachers are actively engaged in suggesting to children different ways to extend knowledge, develop skills, and use language as they participate in various learning experiences. Teachers may introduce to small or large groups new materials such as an eggbeater, a new batch of green play dough, or large photographs of animals found in different environments. After a field trip to the zoo, the teacher may have a group meeting to allow the children to talk about what they observed on the trip. As the teacher records their experiences on a chart, the children may be asked to point to words that begin with a specific letter or sound. "Let's look for words that begin with the letter l. Yes, lion and leopard both begin with the letter l."*

Teachers frequently use precise language to describe what children are doing ("I see the bridge you are making is wide enough for two cars.") or to help children think about different ways to use words to express feelings ("Did you tell Joshua how it made you feel when he pushed you?"). Teachers also model expected behavior as a way to redirect children's actions. For example, after observing a child hitting a doll, the teacher might gently pick up the doll and place it in a rocking chair, saying "I am very angry that you broke my glasses because they help me see how to read. I need you to sit quietly for a little while." When conflicts occur within the group, it may be necessary for an adult to intervene. Teachers may describe what they saw or heard and suggest ways to correct the conflict. "I don't think James meant to drop the paintbrush on your shoe. Can you help me remind him to put his brush in the paint jar before he moves away from the easel?"

As FACILITATORS, *teachers* arrange *the learning environment to influence what and how children learn. Teachers make suggestions for new and creative ways to use materials. They also help children use oral language to negotiate their place in small groups and in the broader classroom community. "You may ask Samantha or Peter to work on the puzzle with you." Or "Can you say 'thank you' to Clarissa for helping you tie your shoelaces?" As they survey children's interactions in the classroom, teachers plan ways to extend children's knowledge and enrich their experiences by:*

- adding or rearranging materials to respond to children's perceived or expressed needs and interests;
- adapting the equipment and materials to accommodate children's special needs;
- providing additional experiences that challenge children's understanding of how things work or what things mean;
- modeling appropriate oral communication;
- demonstrating ways to use equipment and materials in new and different ways; and
- working with children one-on-one or in small groups to help them develop skills or understand concepts.

As REFLECTIVE LISTENERS, *teachers interact with children on a daily basis and may* become active participants or "play partners" as children work in the different learning centers of the classroom. As children pretend to make soup in the dramatic play area, use blocks to reconstruct a building *they saw on a neighborhood walk, or attempt to reproduce the illustrations on the cover of their favorite book, teachers listen receptively and use precise language to describe what children are saying and doing. Teachers use their interaction with children as an opportunity to record observations and reflect on ways to modify the learning environment to respond to children's needs and interests.*

As NURTURERS, *teachers recognize and support children's strengths and interests through positive reinforcement and praise. As they get to know the unique characteristics and abilities of each child, teachers find ways to safeguard the individual child within the group by:*

- allowing children to experience learning at their own pace;
- encouraging children to explore and make meaning of the different facets of the learning environment;
- providing opportunities for children to express their ideas and share their experiences with their peers;
- maintaining a learning environment in which children can thrive because they feel safe, they can express their feelings and they are respected as an important member of the group;
- encouraging children to participate in cooperative learning experiences when they are ready to become part of the classroom community; and
- taking advantage of "teachable moments" to extend learning and build bridges to new understandings and ideas already introduced.

The primary focus of instruction is to provide learning experiences in meaningful contexts and to provide many and varied opportunities for children to:

- extend their knowledge of facts, concepts, words, and ideas;
- develop self-help, social, language, cognitive, and motor skills;
- explore their feelings about themselves, their peers, and the adults in their immediate environment; and
- develop positive dispositions to learn such as curiosity, cooperation, and caring.

Teachers begin by building instruction around what children already know about books, letters, numbers, words, concepts, relationships, and the world around them. As teachers gain awareness of how young children learn, grow, develop, and change, and as they recognize the interdependence among the myriad roles they assume on a daily basis, they learn how to use each role to inform and enhance their work with children. They also learn to balance these roles in response to the changing needs and interests of the children.

Routines and Transitions

Routines are purposeful procedures that ensure a predictable order to the day as well as the effective use of time, space, and materials. Routines are an important part of a child's day. Having a routine gives children a sense of independence and control. It adds to their sense of belonging and helps them to feel more comfortable within the classroom.

Transitions happen in between the scheduled routines of the day. It is particularly important that transitions proceed smoothly. For example, letting children know ahead of time that they have a few more minutes to complete their activity, but soon they will have to clean up, helps to ensure smooth transitions. As teachers observe children engrossed in activities such as identifying the dalmatians in the firehouse puzzle, painting apple trees after a visit to the orchard, working with a small group to form a batch of dough into cookies, or bathing a doll in preparation for bedtime, they may decide to allow some additional time for children to complete their work. Permission should be expressed openly so that the children and other adults are aware of what is being communicated to the child. The expectation that the child will join the group activity in progress at some point prior to its completion should also be clearly stated.

In preschool classrooms, routines are developed into a daily schedule, which serves to:

- *organize the time adults spend with the children, and guide their ongoing planning and decision making;*
- *help children recognize times when particular activities happen during the day and develop expectations of themselves, their teachers, and peers;*
- *provide balance between the routines and transitions that determine how and when children interact with the people and materials in the learning environment;*
- *provide sufficient time (45-60 minutes) for children to become actively engaged in an activity or project;*
- *provide a balance of open-ended, child-initiated activities with more structured, teacher-directed activities; and*
- *include time each day for listening to books read aloud and time to talk about the story.*

In planning for transitions, teachers need to consider the kinds of behaviors children must develop in order to respond to change and work toward increasing independence, such as:

- *listening and responding to instructions such as during arrival or dismissal times;*
- *putting away and retrieving coats, hats, boots, etc.;*
- *coming to a group meeting, sitting, and taking turns talking;*

- *paying attention during activities such as a group meeting, story time, or introduction of a visitor;*
- *going to the bathroom;*
- *serving and/or eating a snack/lunch;*
- *preparing to go outdoors;*
- *working in pairs or small groups;*
- *writing their own names on samples of work;*
- *using and cleaning up art and construction materials;*
- *putting away finished work and works in progress; and*
- *cleaning up after each routine and at the end of the day.*

In order to assist children as they make the transition from one routine to the next, teachers employ a number of strategies that reduce the restlessness and tension which may be the result of children's inborn temperaments as well as the need to conform to adult timelines and expectations. Teachers state expectations in a clear and reasonable manner. Their directions should let children know what will happen next and provide the appropriate guidance to assist them in following through. Having special songs to sing or fingerplays to recite during waiting periods helps the time pass. For example, children who understand that tidying up the classroom when they hear the cleanup song means that all of the materials will be available for use the next day, are more cooperative about cleanup. When teachers state expectations in clear, simple language and follow through in a firm but calm manner, they enable the children to follow routines and transitions more successfully.

57

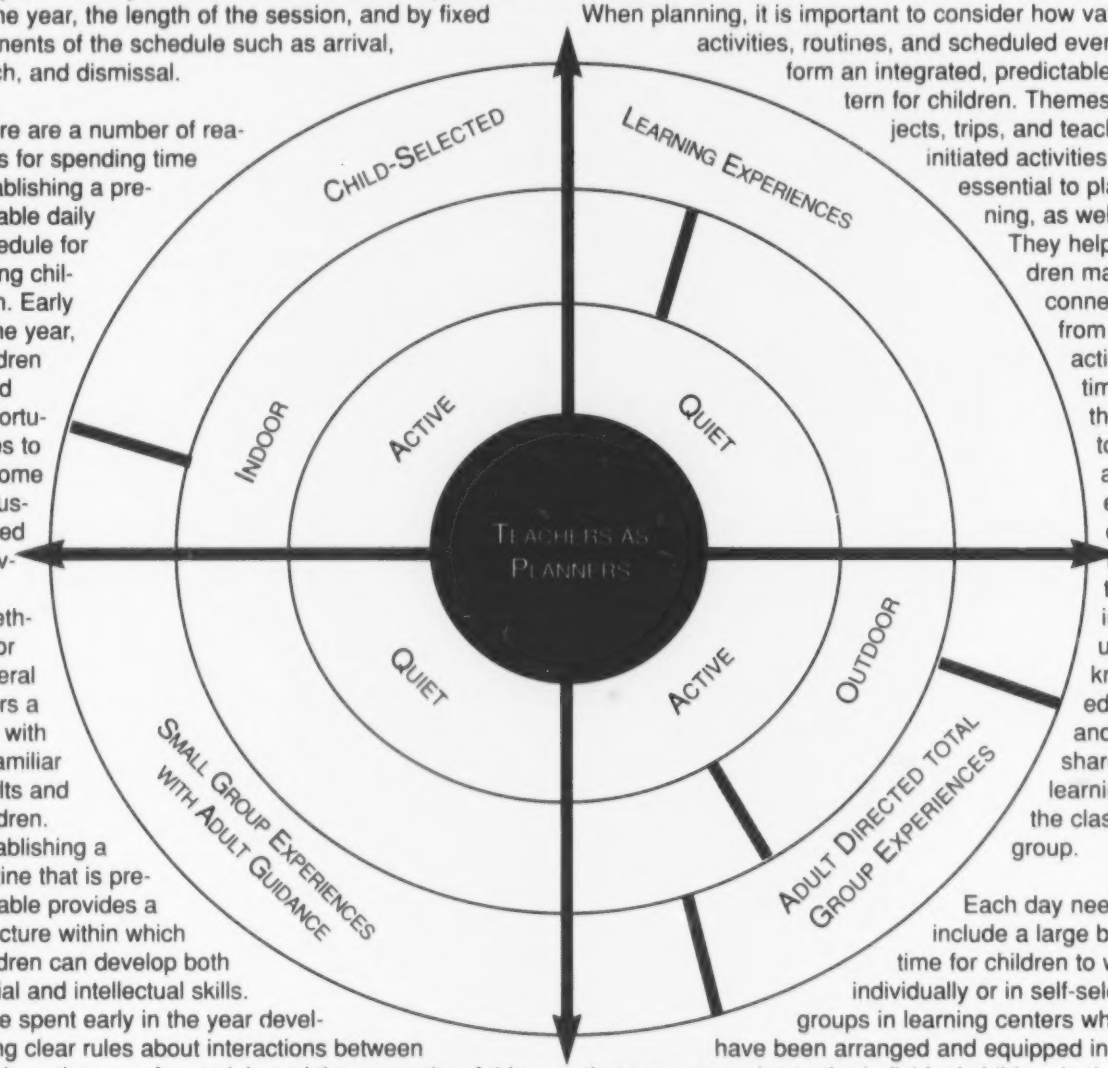
Considerations for Planning

Planning programs for four year olds requires adults to draw from many sources: awareness of family and community expectations, understanding of child development, familiarity with curricula and State standards, and knowledge of the particular needs of the group of children with whom they are working. Daily and weekly schedules are influenced by the time of the year, the length of the session, and by fixed elements of the schedule such as arrival, lunch, and dismissal.

There are a number of reasons for spending time establishing a predictable daily schedule for young children. Early in the year, children need opportunities to become accustomed to living together for several hours a day with unfamiliar adults and children. Establishing a routine that is predictable provides a structure within which children can develop both social and intellectual skills. Time spent early in the year developing clear rules about interactions between children, the use of materials and the necessity of tidying up the classroom at the end of each work period and at the end of the day results in a more orderly day with more time for children to work together on projects and self-initiated activities.

In a preschool program, every part of the day, including time spent in routines such as putting materials away, putting on outdoor clothing, or washing hands before lunch, provides opportunities for problem-solving while enabling children to practice skills and become more independent. A spilled glass of juice at breakfast becomes an opportunity to think about the best way to clean up and provides practice using a sponge or mop.

When planning, it is important to consider how various activities, routines, and scheduled events form an integrated, predictable pattern for children. Themes, projects, trips, and teacher initiated activities are essential to planning, as well. They help children make connections from one activity or time of the year to another and contribute to both individual knowledge and the shared learning of the classroom group.



Each day needs to include a large block of time for children to work individually or in self-selected groups in learning centers which have been arranged and equipped in ways that are responsive to the individual children in the group. Work in learning centers is complemented by time in adult directed large group meetings and small group activities. Adults also need to plan time to interact with individual children as they attend to a child with a smile, a look, a listening ear, or a word of encouragement. This communicates to the child that he or she is a special person in the classroom community.

The schedule at the preschool level is most effective if it is balanced. The child's need for activity and motion is balanced with times for quiet activities such as listening to a story read aloud. The large blocks of time needed for practicing and consolidating skills in the various learning centers are complemented by introduction of new materials, language, or concepts by an adult. Times for outdoor activities are scheduled to support the need for more active, physical experiences. In addition, the daily plans provide specific times for each of the following:

The time for children to have choices should be available throughout the daily routine. Teachers provide opportunities for children to initiate activities based on their interests, abilities, and preferences. This gives children a sense of independence, responsibility and control as they are allowed to make decisions about what is relevant to them. Children also make choices about the materials and equipment needed to complete a task. Teachers may allow children to determine how, when, with whom, and sometimes how long they will engage in an activity. Blocks of time are available everyday for children to try out new ideas, practice new skills, and work on projects with their peers.

The time for group activities is an important aspect of creating and maintaining a community of learners. Teachers often begin a session with a large group meeting to take attendance, read a story, reflect on the events of the previous day, and to discuss the materials and the learning centers that are available to the children during the rest of the day. There are many opportunities for children to meet or work in small groups as they: review individual job assignments on the Classroom Helpers chart, continue working on a block structure started the previous day, use a recipe chart to make the cookies for afternoon snack, copy labels to put on containers of manipulative toys, or work on a mural of drawings about favorite characters from books by the same author/illustrator.

The time for planning needs to happen on a daily, weekly, and monthly basis. Teachers bring to the planning process their knowledge of how young children develop and learn, their expectations of what children should know and be able to do, their understanding of the strengths, interests, and needs of each child, and their experience with arranging and equipping environments which support children as learners. Children contribute to the planning process when they ask questions, share their needs, experiences, and preferences, and demonstrate what they do and do not understand within the learning environment.

The time to celebrate differences should become an integral part of planning for the children. Teachers need to identify and document any special needs (physical, social, emotional, language, dietary, etc) within the group. The emphasis during planning should be to teach the children about the universality of differences and to help them begin to recognize and respect the unique qualities of each individual in the group. The physical environment, the learning experiences, and each part of the daily routine should reflect the modifications needed to foster each child's success as a learner.

The time for families to participate in the planning and implementation of the program begins with the establishment of a climate of sharing between families and teachers. This is achieved when teachers greet and interact with family members during arrival and dismissal times. It is extended when classroom displays include photographs of the children and their families as well as signs that welcome families, provide information about upcoming events, and offer specific materials that may be taken home by the child and/or parent. Family members may contribute ideas for the curriculum from their family history, culture, celebrations, or other special events that represent how they spend their leisure time. Individual family members may be invited to share their interests, talents, and skills with the children by conducting a presentation or arranging a guided tour of their place of employment.

DIMENSIONS OF ASSESSMENT

Assessment is the process of observing, recording, and otherwise documenting what children know and are able to do. It reflects the many ways children learn and the diversity of their experience, language, and cultural backgrounds. It also provides important information about how children engage in learning and when they learn. In addition to observing, recording, and collecting information on how children behave and perform in various settings on a regular basis, teachers may also use the results of developmental checklists completed at regular intervals and diagnostic and/or standardized tests. Ongoing assessment includes the input of specialists in areas such as speech, psychology, occupational and physical therapy. Assessment needs to be conducted, as required, in the language best understood by the child. The results of assessment are used to plan and modify curricula, instructional strategies, daily classroom routines, and the indoor and outdoor learning environments. Assessment also helps teachers reflect on and modify their own practice, and share children's progress with families.

In a preschool classroom, assessment occurs within the context of everyday experience and consists primarily of observing children informally as they are engaged in instructional activities. Teachers and teacher assistants use a variety of methods to keep track of children's progress toward the goals and objectives of the program. They consistently observe and document children's interactions with the people and materials in the environment. Teachers also collect samples of children's work over specified periods of time. When teachers have maintained careful records on children, they can use this information to support requests for additional health and community services. A teacher may request an evaluation by a specialist to assess a child's language, vision, or hearing. A teacher might also refer a child for a more formal evaluation because of general, undefined concerns about a child's development in one or more areas.

Assessment includes input from teachers, parents, and children:

Teachers bring their knowledge of child development and the learning standards as well as their experience working with children in a variety of settings. It is their responsibility to collect information from various sources to document what children know and are able to do throughout the school year. Teachers use this data to design learner-centered environments and to plan effective strategies for implementing the curriculum.

Parents have valuable information about their children; what they know, what they like and dislike, what they expect in different situations, how they express their feelings, and how they respond to problems. Parents are willing to share this information with adults they trust when they understand that it will be used to plan learning experiences to meet the needs of their child.

Children have many opportunities during the daily routine to contribute to the assessment of their growth and learning. They share their needs, strengths, interests, and feelings as they plan and reflect on the events of their day. They make choices and demonstrate their abilities as they interact with the people and materials in the learning environment.

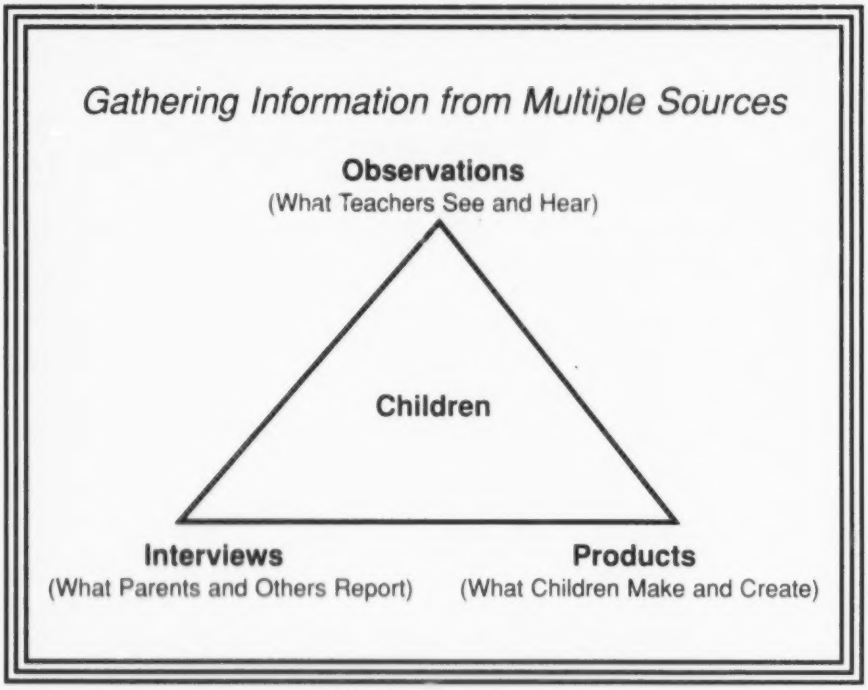
Guidelines for appropriate assessment of young children are listed below. Teachers may use this information to develop effective strategies for keeping track of students' growth and learning.

- Curriculum and assessment are interrelated processes that should be consistent with the goals and objectives of the program.
- Assessment supports children's development and learning. It identifies children's strengths, needs, and progress toward a specific goal.
- Assessment focuses on the child and enables the teacher to make adjustments to the curriculum or daily program.
- Assessment encourages children to evaluate their own learning progress.
- Children's development and learning in all domains, as well as their interests, feelings, and preferences, are routinely assessed as teachers observe children's activities and interaction and listen to their conversation.
- Assessment is an essential part of the teacher's responsibility. The teacher as the primary assessor sees the child in the most varied situations over time and uses assessment results to adjust curriculum plans and instructional strategies.
- Assessment involves ongoing observation of the child in a wide variety of circumstances over one or more school years.
- Assessment is a collaborative process among teachers, between teachers and families, and between children and classroom staff. Information obtained from parents concerning the child is used to plan instruction and evaluate children's progress.
- Assessment reflects the ongoing life of the classroom and typical activities of the children.
- Based on a teacher's need for more difinitive information, a child may be evaluated by a specialist using a more formal, standardized instrument. Results of such assessments are considered along with classroom observations and information obtained from families when making decisions about planning instruction or placing the child.
- Assessment captures children's performance during real activities, rather than activities contrived to isolate specific skills.
- Assessment utilizes an array of tools and a variety of processes, including, but not limited to, collections of children's work (drawings, paintings, writing, dictated stories, reading aloud on tape) records of adult observations, records of conversations and interviews with children, and teachers' reflections upon and summaries of children's progress as individuals and as members of a classroom community.
- Information about children's growth, development, and performance is routinely shared among teachers, teacher assistants, and parents. The method of reporting to parents does not rely on letter or numerical grades or checklists; it provides meaningful, descriptive information in narrative form.
- Children's records and assessments are shared with school personnel and families on a need to know basis.

Keeping Track of Children's Growth

Teachers of preschool children use their knowledge of human development as well as their understanding of sound assessment practices as they work to keep track of the growth and learning of individual children. They obtain information from many sources: conversations with families; observations of the child; written records; and collections of children's work in the form of drawings, paintings, dictated stories, tapes of conversations, and photographs of three-dimensional work with blocks or clay. Such information captures the details of the child's interactions with people and materials in the classroom. The classroom team schedules time to examine the written records and collections. They use the information to:

- *design experiences to extend an individual child's learning,*
- *plan classroom activities related to the curriculum,*
- *communicate with parents, and*
- *structure conversations with other teachers about how to support children as they make the transition from preschool to kindergarten.*



In order for collections to be a useful resource for getting to know the children, teachers save that work which captures the child's strengths and interests over time. Samples are collected, dated, stored in a large portfolio, milk crate, or file drawer, and reviewed regularly by the teaching staff. The collection should include examples of projects or work which challenges the child—perhaps something that requires following specific directions or a model. Examples of the first time the child tries a new medium or technique may also be included. Samples of work are usually plentiful for children who paint, draw, or write. Drawings, paintings, or early writing efforts saved once a month over the school year form the basis of individual children's collections. Collections may also include photographs of block structures and audio or video tapes of conversation in the dramatic play area or retellings of favorite stories.

Connection to Language and Literacy

The connection between early language development and later success in becoming a reader and writer has been clearly validated through research and practice. During the preschool years, the area of growth and learning most related to future success in school is the development of language. Because the fluent, precise use of language is so crucial to later development, preschool teachers need to keep track of changes that indicate children's growth. Teachers collect and keep track of a child's language and literacy development by observing and listening, as well as reflecting on, the beginnings of writing that appear in drawings and paintings that form the child's collection of work. In collecting information about a child's oral language and communication, teachers observe children in a variety of settings. Teachers listen as they interact with children and adults in the classroom, observe them with family members, and watch children on the playground and during trips away

from the classroom. Among the characteristics that classroom staff, parents, and specialists such as speech therapists, may wish to observe and describe are:

How the child uses verbal and nonverbal language to express wants, needs, feelings, interests, and ideas to adults and to other children while working in learning centers, during outdoor play, and in group conversations.

The extent to which the child has mastered the conventions of language use: pronouns, subject-verb agreement (I was, they were), plural forms of nouns, tense of verbs, etc.

Whether the child has articulation problems that interfere with communication with other children or adults.

The child's responses to books read aloud to a large or small group. Does the child have favorite stories? Does the child request certain books or stories? Does the child respond to teacher's questions about a book or story?

How the child represents ideas or feelings in his or her own work such as paintings, drawings, dictated stories, scribble writing, and labels for drawings. At what point in the year does the child begin to include recognizable letters and numbers in paintings and drawings? When does the child begin to put his or her own name on paintings or drawings—either by copying from a card or writing from memory? At what point in the year do drawings and paintings begin to include recognizable figures (person, house, tree, sun, rainbow, etc.)?

How the child responds to what others share during group meetings.

The extent to which children for whom English is a second language begin to incorporate English words and phrases into their everyday communications.

By focusing on individual children, in the context of the group of children in the preschool classroom, teachers increase their knowledge of all children. Careful observation, regular written records, and collections of work are fundamental to keeping track of children's learning. The more adults know about a child as a person and a learner, the more they are able to communicate with families and other teachers about how to best support the child's continued progress.

PROFESSIONAL DEVELOPMENT

The quality of any program for young children is largely determined by the experience and training of staff. All staff should have knowledge of child development and early education as well as supervised experience working with young children. Teachers need to have opportunities to extend their own learning in order to continue to develop teaching practices that support children's growth and learning. These may include: opportunities for reflection, inquiry, and individual study; work within the program or building on specific, agreed-upon issues, such as how to provide continuity for students as they transition from one level to the next; and large group sessions designed to provide information and inspiration. Staff development may also include opportunities for staff to work together. Scheduling should accommodate shared planning times for classroom staff, between regular and support teachers, and joint staff development sessions for collaboratively funded programs. Time for conversations between families and school staff should also be included in the schedule.

Staff development for preschool program staff, like all successful professional development, is ongoing and designed to help staff extend knowledge while providing opportunities for fine-tuning practice and reflection. Strategies are consistent with overall program, building, and district goals and are supported by administrators at all levels.

To improve the quality of preschools, programs should work toward staffing classrooms with teachers who have training in child development and experience working with young children. In public school classrooms, teachers are New York State certified; an early childhood annotation is desirable. Once the goal of securing staff with specialized early childhood training is achieved, it is also critical that staff are available who speak the languages of children who are non-English speakers. Programs may provide professional development opportunities such as the following:

- ❒ *Giving teachers and teacher assistants ongoing opportunities for professional growth, including the time and tools they need to strengthen curriculum, instruction, and learning in their classrooms.*
- ❒ *Encouraging teachers and teacher assistants to pursue their own academic study and to share their knowledge and skills with colleagues and students.*
- ❒ *Launching mentoring programs that team new teachers or student teachers with experienced, highly qualified teachers.*
- ❒ *Initiating programs that actively recruit talented young people and mid-career professionals to become teachers.*
- ❒ *Encouraging collaborations between general and special education teachers.*
- ❒ *Providing peer assistance programs to improve the performance of burned-out or low-performing teachers.*
- ❒ *Expanding efforts to help teachers become more technologically literate, and using technology to improve the professional development available to teachers.*
- ❒ *Seeking better ways to consistently provide current information and hands-on help to teachers to address the isolation that is all too common among teachers.*

Planning Professional Development

In planning staff development, the goal should be to strengthen teaching and learning through a program which includes:

- Activities designed to extend knowledge of human development and learning;
- Experiences which focus on the dynamics of what happens daily in a classroom;
- Opportunities to increase knowledge of language and literacy as a foundation for all content areas;
- Self and peer evaluations on which to base professional development plans;
- Time for reflection and collaboration with other teachers; and
- Practice in integrated curriculum planning and assessment techniques.

One method of capturing children's progress is by recording observations of what children know and are able to do. Teachers in learner-centered environments are challenged to find the time and techniques to record brief, detailed observations. One center for preschoolers uses pages of mailing labels that may be placed on a clipboard or kept in a folder. These labels are useful for recording notes about one child during one or more parts of the daily routine, or for writing observations of several children during a particular part of the routine. A few examples appear below:

October	**October**
Amadeo (age 4) Arrival Invited Jai to share a book with him on the carpet; this was a first!	Tyjaan (age 4 1/2) Circletime Said emphatically after hearing *The Very Hungry Caterpillar* read aloud "My mommy said that caterpillars eat leaves, too!"
Amadeo (age 4) Center Time Wrote the first letter of his first name on a drawing; eagerly shared his success with the assistant teacher, Mrs. Gray.	Alissa (age 4 1/2) Circletime Listened quietly to the story; then asked why the caterpillar's mother let him eat so much.
Amadeo (age 4) Small Group Meeting Dictated what he saw on the trip to the duck pond; used more precise language.	Octavia (age 4) Circletime Moved her carpet square closer to me when I began reading about the caterpillar changing to a butterfly; focused more intently on the illustrations.

Teachers may practice recording brief, detailed anecdotes during a workshop session by having teams of teachers randomly observe each other during an activity, discussing what they recorded and how the information might be used to get to know the individual better.

Teachers may also use a study circle to review and discuss anonymous observations of children recorded during a specified period of time; then they may discuss ways to strengthen the note-taking process as well as ways to use the notes to individualize the curriculum.

The following purposes help to guide teachers, administrators, and staff developers in their selection of appropriate professional development strategies:

Extending Knowledge

Some strategies for extending knowledge about children's development, knowledge of preschool practice, and knowledge of content and learning standards include:

- Participating in activities designed to develop proficiency in implementing new and innovative approaches. For example, teachers may participate in a one-week summer institute in which they explore the qualities and potential of unit blocks and other manipulatives for helping children learn mathematical relationships and language.
- Engaging in the kinds of learning that teachers are expected to practice with students such as working together on inquiry-based investigations, finding solutions to problems, or sharing books.
- Enrolling in graduate courses or advanced degree programs.
- Developing the ability to use basic phrases in languages other than English, as needed, for staff who are not bilingual.

Implementating Curriculum

- Investigating, refining, and using a variety of developmentally appropriate curricula in the classroom. Examples include early literacy strategies or comprehensive programs such as High Scope, Story Telling and Retelling (ST&R), and the Early Literacy Learning Initiative (ELLI).

Integrating Curriculum

- Planning a unit or theme, such as animals, patterns, or homes, that addresses standards and competencies in more than one content area or developmental domain and coming together to share the results of its implementation.

Fine-Tuning Practice

Opportunities for fine-tuning practice and increasing ability to integrate knowledge of content, general knowledge of human growth and learning, and information about individual children may include:

Developing Curriculum Materials

- Creating new instructional materials and strategies or tailoring existing ones to meet the learning needs of individual children, including those with limited English proficiency and those with diagnosed special needs.

Child Study

- Examining and discussing with colleagues written narratives or videotapes of children in classrooms, and learning to identify effective strategies to support individual children as learners while increasing understanding of all children.

Examining Student Work and Student Thinking

- Examining student work and products with other teachers to spark discussion on student learning strategies, to identify learning strengths and develop teaching strategies and materials tailored to those strengths. For example, after collecting children's work for several months, a teacher brought together a group of colleagues to examine the work of one child. After describing one piece in-depth, the group identified the various media the child chose, themes that recurred over time, and other characteristics of the work which shed light on the child as a learner.

Study Group

- Engaging in regular, structured, and collaborative interactions centered on topics identified by the group; opportunities are provided to examine new information, review action research, reflect on classroom practice, solve problems, and recommend policies.

Coaching and Mentoring

- Working one-on-one with an equally or more experienced teacher to improve teaching and learning through a variety of activities; i.e., classroom observation and feedback, problem solving and troubleshooting, and co-planning.

Conducting Action Research

- Exploring an issue related to classroom practice, such as children's responses to books read aloud or knowledge of the natural world, through organized collections of data and reporting to colleagues in oral or written form.

REFLECTION

Opportunities for reflection and planning must be a consistent element of the daily and weekly schedule of a preschool program. Such opportunities engage staff in examining their experiences in their own classrooms, assessing the impact of changes they have made on their students, and thinking about ways to improve instruction, learning, and assessment. Opportunities for teachers to reflect on others' practice, relate it to their own, and think about ways to apply new ideas include:

Participating in Professional Learning

- Linking in person or through electronic means with other teachers or groups of educators to explore and discuss topics of interest, set and pursue common goals, share information and strategies, and identify and address common problems. Examples include early childhood groups sponsored by Teacher Centers and professional organizations, such as the New York State Association for the Education of Young Children or the New York State Reading Council.

Using Technology as a Resource for Professional Learning

- Using various kinds of technology to learn content and pedagogy, including computers, telecommunications, videoconferencing, and CD-ROM and videodisc technology. A variety of Web sites are available including: http://www.ericeece.org/, http://www.udel.edu/ecrq, and http://www.naeyc.org

Sharing Knowledge and Experience

- Experienced professionals find ways to share what they know and are able to do by becoming a coach, mentor, or participating teacher for a preservice student; conducting action research; or developing and presenting workshops, child studies, or examinations of children's work.

A group of early childhood educators applied for a minigrant to enable them to study current research and literature about children's learning in school settings. They applied for a $500 mini-grant from their state professional organization and were awarded funds to purchase books and videotapes and to reproduce articles from professional journals. They made a commitment to read particular pieces and to meet each month to discuss what they had read. One aspect of their study centered around the malleability of brain development in the years prior to formal schooling. This study underscored the need for young children to be exposed to the language of storybooks on a daily basis in order to increase their vocabulary.

Adapted from: *Designing Professional Development for Teachers*, National Institute for Science Education

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APPENDIX

Preschool Classroom Equipment and Materials Checklist

Art Center

- ❒ tempera and fingerpaints
- ❒ crayons and markers
- ❒ store-and-stack utility center
- ❒ 30" x 48" table
- ❒ double easel
- ❒ vinyl smocks
- ❒ adjustable chalkboard easel and chalk
- ❒ non-spill plastic paint pots
- ❒ easel and paintbrushes
- ❒ child-sized safety scissors
- ❒ rolling pin
- ❒ clay and hammers
- ❒ glue and paste
- ❒ collage materials
- ❒ tissue paper
- ❒ newsprint
- ❒ yarn and string
- ❒ feathers
- ❒ craft sticks

Block/Woodworking Area

- ❒ block shelf
- ❒ intermediate unit blocks
- ❒ accessories such as wooden or plastic people, animals, cars, trucks, boats
- ❒ props such as trees and benches
- ❒ cellophane to make rivers and lakes
- ❒ block mobile
- ❒ block patterns
- ❒ architectural block set
- ❒ tunnel and arch set
- ❒ block-play props
- ❒ super building blocks
- ❒ hollow blocks
- ❒ work vehicles
- ❒ railway and traffic sign set
- ❒ bucket of vehicles
- ❒ wedgie community workers
- ❒ wedgie family
- ❒ pegboard hook set
- ❒ workbench with vise and safety goggles
- ❒ tool set
- ❒ wood glue and wood scraps

Science Center

- ❒ tray cubby
- ❒ 24" x 48" table scale or balance
- ❒ 6" prism
- ❒ color paddles
- ❒ easy-view magnifier
- ❒ giant magnet
- ❒ plastic magnet wands
- ❒ bird-study package
- ❒ aquarium system
- ❒ weather props
- ❒ plants
- ❒ naturally found items
- ❒ science books

Sensory Center

- ❒ sand and water table with cover and water exploration activity top
- ❒ props for experiments
- ❒ water kit
- ❒ waterpump
- ❒ boat set
- ❒ geometric-shape sand molds
- ❒ water play set
- ❒ double sand and water wheel
- ❒ sand builder set
- ❒ plastic scoops and funnels
- ❒ sand sieve and containers
- ❒ vinyl smocks

Language/Listening Center

- ❒ double-sided library shelf
- ❒ book stand
- ❒ photo cards
- ❒ memory games
- ❒ sequencing shapes and pattern cards
- ❒ flannelboard with easel stand
- ❒ felt primary shapes
- ❒ flannelboard story kits
- ❒ chalkboards
- ❒ chart paper
- ❒ pencils, rulers, and tape
- ❒ tactile letters
- ❒ alphabet stepping stones (uppercase)
- ❒ letter and number stamp set
- ❒ lotto games
- ❒ Big Books
- ❒ self-concept books
- ❒ primary rhythm set
- ❒ cassette recorder/CD player
- ❒ cassettes and CDs (classical, popular, jazz, children's, soundtracks)
- ❒ books with cassettes

Manipulative/Math Center

- ❒ modular organizer/double unit with trays
- ❒ 30" x 48" table
- ❒ jumbo building blocks
- ❒ large Duplo basic set
- ❒ Duplo world people
- ❒ magnetic activity center
- ❒ learning-to-dress boards
- ❒ lacing shoe
- ❒ 1" (1 inch) beads
- ❒ strings and pattern cards
- ❒ jumbo lacing buttons
- ❒ lacing sets
- ❒ puzzle rack
- ❒ animal puzzles with knobs
- ❒ early concept puzzles
- ❒ nonstereotyped occupations, community, family, and children of the world puzzles
- ❒ colors and shapes bingo
- ❒ primary shape sorter
- ❒ sequential sorting box
- ❒ colored geo forms
- ❒ counting pegs with base
- ❒ assorted counters
- ❒ sorting kit and tray

- ❒ attribute blocks
- ❒ pattern stacker
- ❒ interlocking cubes with storage tray
- ❒ parquetry blocks and pattern cards
- ❒ large pegs and pegboards
- ❒ child-sized counting frame
- ❒ unifix cubes and patterns

Dramatic-Play Center

- ❒ dolls, doll clothes, and furniture
- ❒ dress-up clothes and props
- ❒ child-sized furniture
- ❒ puppets and puppet stand
- ❒ circular table and chairs set
- ❒ four-unit kitchen set
- ❒ kitchen utensils, pots, and pans
- ❒ food sets
- ❒ fruits and vegetables with basket
- ❒ two-position plexi-mirror
- ❒ housecleaning set and stand
- ❒ wooden push-button phone
- ❒ reversible role vests
- ❒ career hats (plastic only)

Cooking Center

- ❒ plastic measuring cups and spoons
- ❒ plastic or aluminum mixing spoons
- ❒ rubber spatula
- ❒ muffin tins
- ❒ cookie sheets (large and small)
- ❒ rebus recipe cards
- ❒ hot-air popcorn popper

Computer Center

- ❒ computer table
- ❒ computer with monitor and printer
- ❒ simple software with concept games for matching, sorting, sequencing, counting, color and number recognition, drawing, and logical-thinking proccsses

Private Spaces

- ❒ furniture, carpet squares, small rugs, or a table and chair to define the space
- ❒ books (enough to rotate often)
- ❒ cassette player/recorder with headphones

Outdoor-Play Area

- ❒ climbing and balancing equipment
- ❒ balls
- ❒ beanbags and targets
- ❒ ring-toss game
- ❒ buckets and paint brushes for water painting

Program-Wide Checklist

Shared Classroom Equipment

- ❒ large sensory table with activity top (if not already in each classroom)
- ❒ light table
- ❒ balance beam
- ❒ indoor climbing gym with 2" foam mats for protection all around
- ❒ puppet/play store/theater/stage
- ❒ living room coffee table and couch
- ❒ clothes tree
- ❒ stacking doll bed with bedding
- ❒ dollhouse with furniture

Art and Office Supplies

- ❒ construction paper
- ❒ paste and glue
- ❒ tissue paper
- ❒ collage materials
- ❒ newsprint
- ❒ chalk
- ❒ variety of paints
- ❒ paintbrushes and paint cups
- ❒ adult and children's scissors
- ❒ rulers
- ❒ tape, staples, and paper clips
- ❒ hole punches and paper fasteners
- ❒ legal tablets
- ❒ stationery and envelopes
- ❒ phone message tablets
- ❒ sticky notes
- ❒ transparency sheets
- ❒ carbon paper
- ❒ first-aid kit

Outdoor-Play Equipment

- ❒ equipment for climbing and balancing
- ❒ sandbox (with a minimum of 6" sand)
- ❒ table or area for outdoor projects
- ❒ 10", 12", and 15" tricycles

Outdoor-Play Materials

- ❒ balls
- ❒ large and small parachutes
- ❒ tricycles
- ❒ jumpropes
- ❒ beanbag and ring-toss games
- ❒ hula hoops
- ❒ props for hide-and-seek or scavenger hunts
- ❒ laminated cards with games
- ❒ books of songs and fingerplays for use outside
- ❒ maze-building equipment
- ❒ obstacle course building equipment
- ❒ tumbling mat
- ❒ activity tubs

Rotating Manipulatives

- ❒ specialty Lego and Duplo sets
- ❒ puzzles, including floor puzzles
- ❒ fine-motor toys
- ❒ matching games
- ❒ board games
- ❒ stacking toys
- ❒ block props
- ❒ special diorama supplies
- ❒ counting frame package

Rotating Language Arts Materials

- ❒ sets of Big Books with corresponding children's readers
- ❒ Big Book easel

- ❒ children's encyclopedia (books or CD-ROM version)
- ❒ book sets on special topics
- ❒ puppet sets
- ❒ scenic floor mats
- ❒ read-along books and cassettes
- ❒ flannelboard sets
- ❒ photo cards

Rotating Music, Movement, and Dance Props

- ❒ box of scarves
- ❒ assorted CDs, records, or cassette tapes
- ❒ colored exercise bands
- ❒ rhythm sticks
- ❒ musical instrument sets

Prop Boxes

These can be unlimited! Start with themes from your current year's curriculum and keep expanding. Here are some ideas:

- ❒ animals
- ❒ doctor's office
- ❒ restaurant
- ❒ firehouse
- ❒ zoo
- ❒ farm
- ❒ factory
- ❒ sea
- ❒ forest
- ❒ careers
- ❒ bus or train station
- ❒ airport
- ❒ grocery store

Parent Lending Library

- ❒ shelf or display in prominent area
- ❒ books on a wide variety of parenting topics, including games parents and children can play together
- ❒ activities and books to reinforce skill and concept development
- ❒ teacher-made games
- ❒ home/school literacy bags
- ❒ children's literature
- ❒ videotapes and cassette tapes on topics of interest to both children and parents

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